DOCUMENT RESUME

ED 169 078 TM 008 302

TITLE Final Evaluation Report. 1976-1977. High School Curriculum Evaluation. Publication Number 76.68.
INSTITUTION Austin Independent School District, Tex. Office of Research and Evaluation.
PUB DATE 30 Jun 77
NOTE 148p.; Not available in hard copy due to marginal reproducibility of original document

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Academic Achievement; Counselor Role; Course Content; Credits; *Curriculum Development; *Curriculum Evaluation; Educational Assessment; Educational Counseling; Graduation Requirements; *High School Curriculum; Needs Assessment; *Quarter System; School Orientation; *Secondary Education
IDENTIFIERS Austin Independent School District TX; Texas (Austin)

ABSTRACT

The effects of the mandated quarter system and the expanded and revised high school curriculum were assessed in Austin, Texas, based upon achievement test scores, attendance records, and objectively collected opinion data in seven areas of concern. The seven decision questions which affected allocation of funds, personnel, time and material concern: (1) making major alterations to the curriculum; (2) changing the number of credits and the minimum reading and mathematics competencies required for graduation; (3) modifying the responsibilities of high school counselors; (4) instituting year-round schooling; (5) altering the academic advising procedures; (6) improving eighth-grade orientation to the high school curriculum; and (7) coordinating the content of the same courses taught at different schools. Evaluation findings consist of answers, with supportive data, to 28 questions, as well as 12 miscellaneous findings. (MH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Research And Evaluation

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED169078

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Freda A Holley

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

TM 008 392

OFFICE
OF
RESEARCH AND EVALUATION

BEST COPY AVAILABLE

austin independent school district

BOARD OF TRUSTEES

Gustavo L. Garcia, President

Reverend Marvin C. Griffin, Vice President

Jerry Nugent, Secretary

Will D. Davis

Winnie Gage

DeCourcy Kelley

M. K. Hage, Jr.

SUPERINTENDENT OF SCHOOLS

Dr. Jack L. Davidson

COORDINATOR, OFFICE OF RESEARCH AND EVALUATION

Dr. Freda M. Holley

FINAL EVALUATION REPORT

1976-1977

HIGH SCHOOL CURRICULUM EVALUATION

June 30, 1977

Stan Drezek
Senior Evaluator

Elaine Morris
Evaluation Assistant

Tom Roudebush
Evaluation Assistant

Barbie Bellinghausen
Secretary

Approved: Freda M. Holley

Freda M. Holley, Ph.D.
Coordinator of Research and Evaluation

Publication Number: 76.68

PROGRAM STAFF

The following Austin Independent School District staff members are responsible for major aspects of the high school curriculum evaluated in this design. However, there are many persons in the individual high schools and central administration not listed who directly affect the curriculum. In particular, all the department heads and teachers working in the high schools are the real agents of curriculum. In addition, the high school counselors perform an essential role in curriculum. Our office thanks you.

Department of Secondary Education

Lawrence Buford, Director

Maud Sims, Assistant Director

Principals

Charles Akins
Jacquelyn McGee
Forrest Kline
Ron Beauford
Adan Salgado
Rodger Wiley
W.A. Sloan
James Viramontes
Jack Allison

Schools

Anderson High School
Austin High School
Crockett High School
LBJ High School
Johnston High School
Lanier High School
McCallum High School
Reagan High School
Travis High School

Coordinators

La Rue Allison
Ida Courtney
Bill Duncum
Curt Eckardt
Ron Foy
Sherilyn Howze
Louis Igo
Myrtle Johnson
Vera Jones
Bob McLean
Bertha Means
Julia Mellenbruch
Frances Nesmith
Irene Kanter, Barbara Roberts
John Pearson
Margaret Ruska
Bobbie Sanders, Kathy Williams
Wayne Schade
Sue Fleming, Elizabeth Essary
Elgin Schilhab
Anne Flores, Jane Williams
Richard Sutch
Perry Suter
La Neal Tankersley
Don Zirkle

Curriculum Areas

Homemaking Education
Library Services
Vocational Cooperative Training
P.E., Health, Safety/Driver's Ed.
Industrial Arts
Art Education
Trade and Industrial Vocations
Business Ed. and Voc. Office Ed.
Student Activities
Learning Resources
Reading
Foreign Language
Social Studies
Social Studies Interns
Instrumental Music
Language Arts
Language Arts Interns
Science
Science Interns
Mathematics
Mathematics Interns
Choral Music Education
Pre-Voc. Industrial Arts Ed.
Girls Physical Education
Media Services

Department of Student Development

Dr. Matt Snapp
Director of Student Development

Stan Brooks
Supervisor of Counseling & Guidance

TABLE OF CONTENTS

Program Staff ii

Table of Contents iii

I. Abstract 1

II. Decision Questions Addressed

System-level Decision Questions 4

1. Given student performance on a range of outcome measures, in what if any areas, should the revised curriculum undergo major change? 5

2. Should the quarter course credits and minimum reading and math competencies for graduation be changed? 9

3. Should AISD modify the job description and responsibilities of high school counselors? 10

4. Should AISD move toward year-round schooling? 12

5. What changes need to be made in the advising process to assure that students select courses appropriate to their needs? 13

6. How can the junior high schools be assisted to improve the orientation of eighth graders to the high school curriculum? 15

7. Should AISD consider acting to increase the similarity of the same course taught in different schools by different teachers? 16

III. Project Description

A. Program 17

B. Context 24

C. Evaluation 31

IV. Evaluation Findings

A. Evaluation Questions 37

1. Has the districtwide median achievement score for each STEP subtest increased in 1976-77 over 1975-76? 37

2. Is there a relationship (separate for different ability groups) between gains in achievement from 1975-76 to 1976-77 and credits earned in Language Arts, Mathematics, Social Studies, and Science? 44

3. Did the districtwide mean SAT scores in 1975-76 increase from previous years? 45

4. Has the revised curriculum affected students' habits and attitudes toward study? 47

5. Has the districtwide mean high school percentage of attendance increased in 1976-77 from previous years? 51

6. Have the school leaver or graduation rates changed from previous years? 53

7. What are the distributions of grades for each course and curriculum area? 56

8. What "costs" has the quarter system created for those responsible for implementation? 59

9. What are the distributions of student enrollment (by sex and ethnicity) for each quarter course and course area? 62

10. What courses are students (college bound and non-college bound) taking and exiting AISD with; in particular, how are the 27 quarter course electives being used? 65

11. How do our eleventh graders score, compared to a national sample of seniors, on the separate STEP subtests? 68

12. What actions have been planned by the high schools to implement the minimum competency requirements in mathematics and reading? 75

13. What is the number and percentage of Black, Mexican-American, and Anglo students due to graduate in Spring, 1979 who would be required to take more than 9 quarters of Language Arts? 76

14. What is the number and percentage of Black, Mexican-American, and Anglo students due to graduate in Spring, 1979, who would be required to take more than 6 quarters of Mathematics? 79

15. What are understood to be the major duties and responsibilities of counselors? 81

16. What are counselors' priorities among the major duties and responsibilities? 84

17. Are counselors available (quantity) and helpful (quality) to students? 86

18. Would students attend a summer quarter? 89

19. Would teachers, counselors, and other staff work a summer quarter? 90

20. What are the perceived problems and benefits of year-round schooling? 92

21. Are students taking appropriate courses? 94

22. From whom do students receive most of their information and advising? 101

23. How do students use the Information Guide and four-year "course plan" to select appropriate courses? 103

24. Where do teachers who advise get their information? 106

25. Was the orientation provided to ninth graders while they were in junior high sufficient to help them adapt to the high school curriculum? 107

26. To what degree does the content of selected courses follow the course outlines? 109

27. How much similarity in the course content of selected courses exists across the district? 111

28. What percentage of final examination items require only that students select responses as opposed to constructing responses? 113

B. Miscellaneous Findings 115

Misc. 1. What do high school prinicipals and secondary instructional coordinators believe are the benefits of the quarter system, besides the expanded curriculum? 115

Misc. 2. Is the quarter system judged an improvement over the semester system? 116

Misc. 3. Do the high school principals and secondary instructional coordinators believe the benefits of the quarter system could be retained and the problems avoided by operating the revised curriculum under the semester system? 119

Misc. 4. Do the courses offered in the high schools form a comprehensive and organized curriculum? 120

Misc. 5. Did the districtwide mean American College Testing Program (ACT) scores increase in 1975-76 from previous years 121

Misc. 6. Do AISD high schools have certain minimum conditions (student safety, student attitudes, and school atmosphere) present which are conducive to student learning? 123

Misc. 7. Do AISD high school personnel experience satisfaction with their roles? 124

Misc. 8. Who should have the primary responsibility for advising students about which courses to take? 125

Misc. 9. How do high school students feel about school? 127

Misc. 10. What do AISD graduates do after high school? 128

Misc. 11. Are texts and supplementary materials available? 131

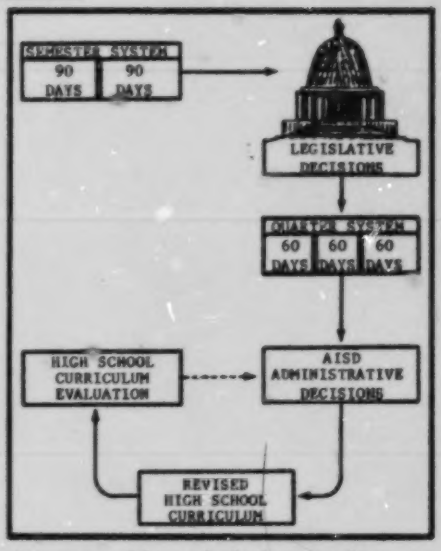
Misc. 12. How many class periods per quarter course do teachers estimate are spent on non-instructional activities? 132

A Technical Report which presents more detailed data collected during the evaluation of this project is on file in the Office of Research and Evaluation, and a copy has also been placed in the AISD Professional Library.

I

ABSTRACT

HIGH SCHOOL CURRICULUM EVALUATION, 1976-77



Description of Program

In 1971, the 62nd Texas State Legislature passed a bill mandating the implementation of the quarter system. AISD used this opportunity to expand and revise the high school curriculum. 1976-77 is the second year AISD high schools have operated under the quarter system and revised curriculum.

The current high school curriculum offers 780 possible courses. At each high school, any quarter, 200 to 300 courses are offered. Even the smallest high school offers more than 400 different courses over the three quarters. Students can make use of this diversity; 27 of the 63 quarter courses required for graduation are elective courses.

It costs AISD approximately $22.4 million to run and centrally administer its nine comprehensive high schools. The high school curriculum is managed by an administrative staff consisting of a Director of Secondary Education, nine high school principals, and about 20 assistant principals. Twenty-one secondary instructional coordinators and four interns work with a staff of nearly 1000 teachers and department heads and 48 counselors to implement this curriculum.

Evaluation Purposes and Activities

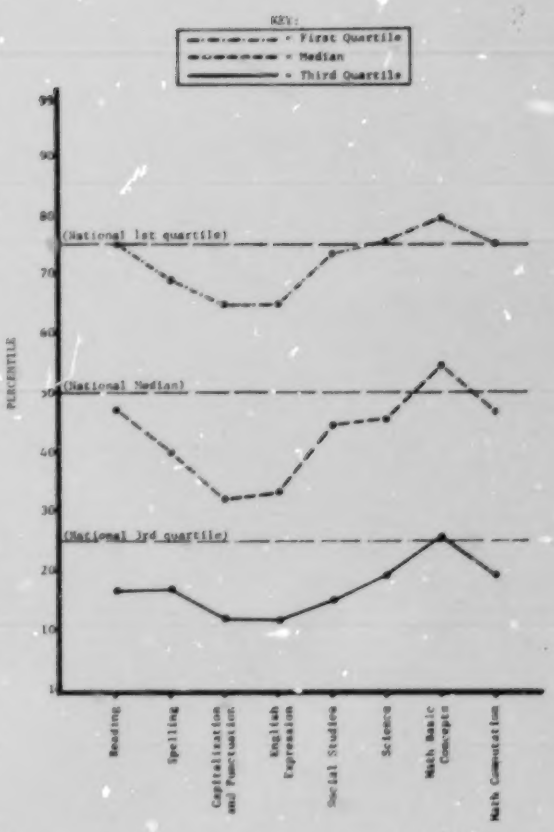
The High School Curriculum Evaluation's purpose was to assess the impact of the quarter system and revised curriculum on AISD students. Specifically, evaluation activities were designed to answer these major decision questions:

1. *Given student performance on a range of outcome measures, in what if any areas, should the revised curriculum undergo major change?*
2. *Should the quarter course credits and the minimum reading and math competencies required for graduation be changed?*
3. *Should AISD modify the job description and responsibilities of high school counselors?*
4. *Should AISD move toward year-round schooling?*
5. *What changes need to be made in the advising process to assure that students select courses appropriate to their needs?*
6. *How can the junior high schools be assisted to improve the orientation of eighth-graders to the high school curriculum?*
7. *Should AISD consider acting to increase the similarity of the same course taught in different schools by different teachers?*

Evaluation Findings.

Student performance. The 1976-77 district-wide median percentile scores on all eight subtests of the Sequential Tests of Educational Progress have increased from 1975-76. However, the revised curriculum itself may not have been responsible for the achievement gains. Furthermore, the lowest 25% of AISD's students have not generally shown increased achievement. Also, minority students' achievement is 25 to 30 percentile points below Anglo students' achievement.

On the basis of the relationship between courses passed and achievement, Language Arts is the curriculum area most needing immediate attention. Social Studies may need some attention, but Mathematics and Science probably do not. AISD scores on the Scholastic Aptitude Test (SAT) support the need in the area of verbal skills. So do the results of a content analysis of final examinations; less than 10% of the items ask students to write even a complete sentence. Yet, the percentage of A's and B's awarded in the required academic areas is 51%. Two-thirds of the elective areas grant 10% more A's and B's and one-third grant 20% more.



ELEVENTH GRADE SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS. DISTRICTWIDE MEDIAN, 1st QUARTILE AND 3rd QUARTILE. These compared with the national for the Spring, 1977 STEP results.

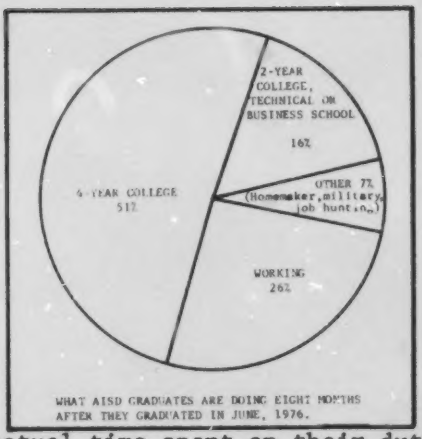
Given 1970 national norms and examining our 11th grade data (the "exiting year" from the required curriculum), Mathematics Basic Concepts is the only STEP subtest above the national norm. Reading, Social Studies, Science, and Mathematics Computation are 3 to 6 percentile points below the norm. Spelling, Capitalization and Punctuation, and English Expression are 10 to 18 percentile points below the norm.

Quarter course credits and competency requirements. Students take their required courses first; only then are elective courses taken. No single elective area dominates the elective credits earned. College bound students earn about eight elective credits in the required academic areas; non-college bound students earn about two. Averaging both groups, Fine Arts with 3.4 credits, Vocational/Cooperative Education with 3.3 credits, Business Education with 2.7 credits, and Foreign Language with 2.6 credits are the other major elective areas.

Some 1000 to 1200 1978-79 seniors will not meet the 8th grade reading and mathematics competency requirements. The affected students will include a disproportionate number of minority students.

The patterns of course enrollment by sex and ethnicity have not changed from 1975-76. There are some curriculum areas, Special Education for example, with disproportionate numbers of students of one sex or ethnic group.

What our high school graduates are doing. About fifty percent of AISD's graduates attend four-year colleges and sixteen percent attend two-year colleges or business/technical schools. Twenty-six percent get jobs; seven percent are looking for jobs or have joined the military. Also, three-quarters of our graduates going to school also work or are looking for work. Only one-half of our working graduates not attending school have employment in fields related to their training in high school.



WHAT AISD GRADUATES ARE DOING EIGHT MONTHS AFTER THEY GRADUATED IN JUNE, 1976.

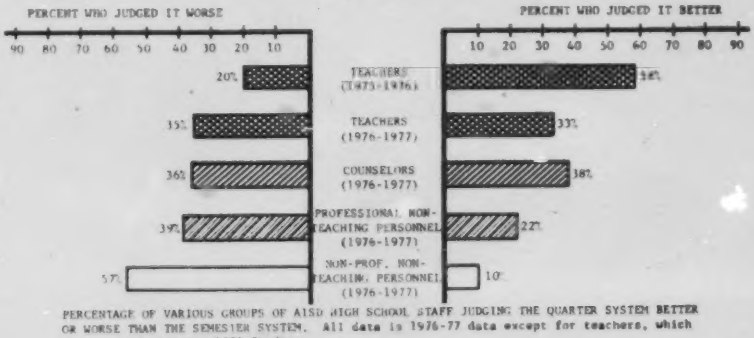
The counselor's job. Counselors' estimates of actual time spent on their duties and their estimates of what would be desirable match very closely. Counselors do see a need to increase their availability; so do principals and coordinators. Only half our former students report a counselor was helpful in planning their high school program, and only twenty percent believe a counselor helped them decide what to do after high school. Still, two-thirds of those students who do talk with counselors report being helped.

Year-round schools. Our high school principals are against operating a full fourth quarter; our secondary coordinators are divided. Both groups see securing financing, managing the logistics, and obtaining community acceptance as the major problems. Teachers and students would need to be convinced to teach and enroll for a summer quarter.

Advising. Seventy-five percent of AISD graduates one year out of school believe high school gave them adequate preparation for their present activities. However, two-thirds believe high school should have required more of them. When students were asked what one factor in fact was most important in selecting appropriate courses, three emerged: First, "Someone who is able to help you plan"; second, "A good idea of what you're going to do in the future"; and third, "Enough time to choose courses."

Similarity of the same course taught by different teachers. There is high agreement among teachers at different schools on which areas of the course outlines are covered. About half the outline content areas are covered in the basic required courses.

"Costs" of the revised curriculum. High school principals, secondary instructional coordinators, teachers, and counselors all cite major problems with the quarter system and revised curriculum. However, we do not know if these problems or others characterized the semester system. If it were a legal option, six of our nine principals might support a return to the semester system. Also, teachers, counselors, and non-teaching staff are, at best, divided on whether the quarter system is better or not as good as the semester system. Teacher attitudes are worse this year than last year.



PERCENTAGE OF VARIOUS GROUPS OF AISD HIGH SCHOOL STAFF JUDGING THE QUARTER SYSTEM BETTER OR WORSE THAN THE SEMESTER SYSTEM. All data is 1976-77 data except for teachers, which is compared with the 1975-76 data.

II
DECISION QUESTIONS ADDRESSED

INTRODUCTION

Decision questions are the primary questions facing those responsible for a program. The answers to decision questions directly affect the distribution of money, personnel, time, and material resources within a program. When the Office of Research and Evaluation was authorized to conduct the High School Curriculum Evaluation, our first task was to elicit decision questions from program staff. We therefore worked directly with the Director and Assistant Directors of Secondary Education, the nine High School Principals, the twenty-one Secondary Instructional Coordinators, and the Director of Student Development. These persons, under the authority of the Cabinet and the Board of Trustees, are responsible for the high school curriculum. They are the staff who will make recommendations to the Board on the decision questions addressed by this year's High School Curriculum Evaluation.

Again, the answers to decision questions directly affect the distribution of resources. Therefore, the responsibility for making recommendations appropriately rests with the program staff, not the evaluators. The role of the evaluators is to elicit the decision question, collect information relevant to the decision question, and provide that information. No recommendations are made in this report. All recommendations will be made by the program staff based upon the relevant findings presented in this chapter and other considerations which program staff judge must be taken into account.

The High School Curriculum Evaluation staff presented all program staff with tentative decision questions in August, 1976. Each person had an opportunity to review these questions. Many decision questions were deleted; many were modified, and new ones were added. The end result was a list of seven key decision questions on the high school curriculum.

During the 1976-77 school year our task has been to gather objective data which would allow the district to make these decisions. Our Final Technical Report presents all our procedures and all our data. This Final Evaluation Report provides, in the Evaluation Questions and Miscellaneous Findings sections, summaries of the data we collected to answer the decision questions. This Decision Questions Addressed chapter provides major evaluation findings relevant to these decisions.

While the information provided here is relevant and useful in making the decisions, other considerations also must influence these decisions. Some of these cannot be measured in any objective sense; others could be measured by ORE, but can much more easily be assessed directly by the program staff involved. Thus, while it is hoped that the decisions the district makes will take into account the evaluation findings presented here, they will inevitably reflect other undocumented information. This other information will be presented along with the recommendations forwarded to the

Board by program staff.

This has been a large and costly undertaking. Its value depends ultimately on two things. First, the professionalism of the evaluators in eliciting, collecting, and reporting useful information. Second, the professionalism of the program staff, Cabinet, and Board of Trustees in using the information. Our job as evaluators has neared completion with this report. The task of the program staff and district is about to begin.

SYSTEM-LEVEL QUESTIONS

1. Given student performance on a range of outcome measures, in what if any areas, should the revised curriculum undergo major change?

   RELEVANT ORE FINDINGS:

   The districtwide 1976-77 median percentile scores on all eight subtests of the Sequential Tests of Educational Progress have increased from 1975-76.

   However, the lowest-achieving 25% of the district's students have not increased their achievement.

   There are probably many reasons for this increase; the revised curriculum itself may not have been a major reason.

   On the basis of the relationship between courses passed and achievement, the curriculum area most needing immediate attention is Language Arts; Social Studies may need some attention. Science, and even more definitely, Mathematics coursework appear to build toward achievement.

   Fifty-one percent of AISD's graduates attend four-year colleges and sixteen percent attend two-year colleges / business or technical schools. About 25% of our graduates get jobs, 7% join the military or are looking for work.

   Half of AISD's graduates who continue their schooling also work; another quarter want to work. Three-fourths of these working students are working in fields not related to high school training. Of the graduates who are working and not in school, half have jobs not related to their high school training.

   AISD scores on the Scholastic Aptitude Test (SAT) support the achievement test results. AISD average scores on the SAT mathematics scale are about 31 points above the national sample. The AISD average scores on the SAT verbal scale are about 23 points above the national sample. The national and AISD scores on the SAT are declining at about the same rates. Both evidence a relatively faster decline in verbal than mathematical performance.

AISD scores on the American College Testing Program (ACT) have declined at about the same rate as those of the national comparison sample. AISD scores have also remained below the national sample.

The grade distribution in the four required academic areas is:

A's: 22% B's: 29% C's: 27% D's: 4% F's: 17%

Therefore, the percentage of A's and B's is 51%, the failure rate is 17% and D's are not used frequently (D's indicate attendance and effort, but not necessarily mastery). Furthermore, the grade distributions are remarkably constant across the four areas: Mathematics tending to have the "toughest" grading and Language Arts the "easiest."

The only major elective area with a grade distribution comparable to that of the required areas is Industrial Arts. Two-thirds of the elective areas grant 10% more A's and B's than the required academic areas. One-third grant 20% more A's and B's. The vocational areas tend to have the lowest proportion of A's and B's among elective areas.

There are no differences in study habits and attitudes of AISD high school students in Spring, 1977, and a comparable sample of our students in Spring, 1976. This is the case despite the fact that the percentage of coursework taken under the quarter system has increased.

There is no observable effect of the quarter system and revised curriculum on either attendance or leaving school.

Students take their required courses first, except Health, which is generally taken in 11th grade. They the take electives, but no one elective area dominates. The required academic areas, Fine Arts, Business, Foreign Language, and Vocational/Cooperative Education are all major elective areas.

Teachers believe the courses in their curriculum areas form a comprehensive and organized curriculum, making it possible for the well advised student to gain necessary competence.

In Industrial Arts, Trades/Industrial Education, ROTC, and Aerospace enrollment is over three-fourths male. In Agriculture and Special Education it is about two-thirds male. Business Education and Homemaking enrollments are less than one-quarter male, while Foreign Languages, Choral/General Music, and Vocational/Cooperative Education enrollments are about 40% male. Enrollment by sex showed very little change this year from the 1975-76 data.

In all required areas and half of the elective areas, course enrollments by ethnic group are very close to the districtwide percentages. Furthermore, in all areas there is little quarter-to-quarter change. Foreign Languages, Instrumental Music, Choral/General Music, and Aerospace have substantially higher Anglo/Other

enrollment than the district. Agriculture has almost no minority students enrolled. The enrollment of Black students in Homemaking is above the district, and the number of Mexican-American students enrolled in Trades/Industrial Education is double the district. Minority students comprise two-thirds of the enrollment in Special Education. Ethnicity showed very little change this year from the 1975-76 data.

As many as six high school principals might support a return to the semester system if it were a legal option. Secondary instructional coordinators would not.

High School principals believe the most serious problems of the quarter system and expanded curriculum are (1) "scheduling a large number of courses three times a year", (2) "teachers getting acquainted with three groups of students per year", and (3) " a shortage of texts and supplementary materials."

Secondary Instructional Coordinators believe the most serious problems of the quarter system and expanded curriculum are (1) "scheduling a large number of courses three times a year", (2) "more paperwork involved with three quarters", and (3) "many students needing course changes."

As many teachers and counselors believe "the quarter system is not as good as the semester system" as believe "the quarter system is an improvement." Non-teaching personnel believe, more than 3:1, that the quarter system is not as good.

The most serious problem with the quarter system and expanded curriculum which teachers experience is "doing too much paperwork." The second most serious problem is "having several ability levels in the same class period." Both of these problems, but particularly the latter, were probably also problems with the semester system.

According to AISD counselors the most serious problems the quarter system gives them, in terms of interfering with their ability to offer services to students are (1) "scheduling and registration", (2) "paperwork", and (3) "insufficient time."

The problem most often nominated as most serious by AISD non-teaching personnel is having too much to do and too little time to do it. The second most frequently nominated problem is lack of adequate personnel, materials, and facilities.

Texts and supplementary materials are not as widely available as desirable. Some students (41%) and teachers (33%) report there are not enough texts and other materials in their courses. Forty-five percent of teachers in the required academic areas indicate problems with availability. Principals also ranked the shortage of texts and supplementary materials as the third most serious problem associated with the quarter system and expanded curriculum.

Nonetheless, 90% to 95% of all AISD high school teachers, counselors, and non-teaching personnel feel "great" or "moderate" satisfaction with their own roles in AISD high schools.

About three times as many of the 957 tenth through twelfth graders in the Student Questionnaire sample like the quarter system as dislike it (66% versus 21%). Student attitudes toward the quarter system this year are very similar to last year.

EVALUATION FINDINGS REFERENCED:

Evaluation questions 1, 2, 3, 4, 5, 6, 7, 8, 9, M-1, M-2, M-3, M-5, M-6, M-7, M-9, M-10

2. Should the quarter course credits and the minimum reading and math competencies required for graduation be changed?

RELEVANT ORE FINDINGS:

A large number (about 1000) of AISD's 1978-79 high school seniors will not meet the 8th grade reading competency requirement. The students affected will include a disproportionate number of minority students. They will need to take additional Language Arts courses in the 12th grade.

A large number (about 1200) of AISD's 1978-79 high school seniors will not meet the 8th grade mathematics competency requirement. The students affected will include a disproportionate number of minority students. They will need to take additional Mathematics courses in the 11th grade.

Given the 1970 national norms, the AISD eleventh grade median percentile score is below the national median on all tests except Mathematics Basic Concepts. It is below the norm (3 to 6 percentile points) for Reading, Social Studies, Science, and Mathematics Computation. It is farther below the norm (10 to 18 percentile points) for Spelling, Capitalization and Punctuation and English Expression.

AISD has about the national average percentage of "academically able" students, but much more than the average percent of "academically disabled" students.

Black and Mexican-American students' achievement is 25 to 30 percentile points below Anglo students across the STEP subtests.

Teachers estimate about 12 of the 60 periods in each quarter course are lost for instruction. When we also subtract student absences and some test and examination time the 60-day quarter course turns out for the average student to be only about 36 hours of instruction.

By the end of the second quarter of their senior year, AISD students have earned 60 of 63 credits required. The students have completed the requirements in Health and Physical Education and have earned 34 credits in required academic areas, five more than required.

College bound students have earned four more credits overall than the non-college bound, and eight more credits in academic areas. Non-college bound students have earned five more credits in vocational areas.

There is no single area which dominates the elective courses taken. Five elective credits have been earned in the required academic areas, and 19 in the elective areas.

EVALUATION FINDINGS REFERENCED:

Evaluation questions 10, 11, 12, 13, 14, M-12

3. Should AISD modify the job description and responsibilities of high school counselors?

RELEVANT ORE FINDINGS:

Counselors estimate they spend 39% of their time on Curriculum Related Counseling, 23% on Personal Adjustment Counseling, 13% on Consulting, and 25% on Other Duties (including 13% on record keeping). Counselors' priorities include spending about the same percentage of their time in the three major areas, but reducing record keeping to 4% in order to increase Personal Adjustment Counseling and Consulting.

Counselors see a need to increase the amount of time they spend overall, even though they report working more than a 40-hour week. They see large caseloads and paperwork as major factors in reducing their effectiveness.

Principals and secondary instructional coordinators would change the high school counseling program by taking steps to increase counselors' availability, such as decreasing caseloads and supplying clerical aides.

Principals would specifically increase the time counselors spend on "interpreting test scores and helping students assess their abilities", "communicating with parents", and "training teachers for academic and vocational advising."

Coordinators would specifically increase the time counselors spend on advising students "about course selection" and "about post-graduation plans."

Eight months after graduation only half the AISD former students reported that a counselor was helpful in planning their high school program. Moreover, 80% of the graduates disagree, half of them strongly, with the statement, "A counselor helped me decide what to after high school."

About 25% of a representative sample of 835 tenth through twelfth grade students report confidence in counselors. They can talk, privately, and counselors do listen and can help.

Seventy-five percent of our students report asking to see a counselor, but only 36% have been referred by teachers or sent for by counselors.

Students are seen promptly, when they ask to see a counselor, but almost half think it is "too much hassle to try to see a counselor."

Counselors do not increase their availability through group work.

The percentage of students who report being helped by counselors, across a wide variety of concern areas, is about 65%. However, the areas dis-

cussed by large numbers of students are primarily curriculum related, and not all students use their counselors.

EVALUATION FINDINGS REFERENCED:

Evaluation questions 15, 16, 17

4. Should AISD move toward year-round schooling?

RELEVANT ORE FINDINGS:

Our high school principals are 2:1 against operating a full fourth quarter; only half the secondary instructional coordinators would want to operate four quarters.

The major problems in moving toward year-round schooling, according to high school principals and secondary instructional coordinators, are securing the finances, managing the logistics, and generating community acceptance.

Principals and coordinators perceived very limited benefit from year-round schooling,

Forty-five to fifty percent of AISD teachers, counselors, and non-teaching personnel would prefer the summer off. About 40% of teachers, counselors, and non-teaching staff would consider taking off different quarters in different years. Only about 10% of the teachers and 25% of the others would choose to work four quarters.

The district will have greater difficulty recruiting teachers for a summer quarter from some curriculum areas than others.

Eighty-one percent of AISD tenth through twelfth-grade students (N=942) questioned on our Student Questionnaire would prefer to have the summer quarter off. Twelve percent would attend four quarters to graduate early.

EVALUATION FINDINGS REFERENCED:

Evaluation questions 18, 19, 20

5. What changes need to be made in the advising process to assure that students select courses appropriate to their needs?

RELEVANT ORE FINDINGS:

Seventy-five percent of AISD graduates, one year out of high school, believe high school gave them adequate preparation for their present activities. However, two-thirds of these graduates believe high school should have required more of them.

According to student and staff judgments, breakdowns in the process by which students select appropriate courses are occuring in three areas:

(1) The task: There may be too many courses to choose from and and schools may not allow enough time for students to think.
(2) The students themselves: Students may not be mature enough to make the choices the curriculum demands, they may not use the time the school gives them, and they may lack a clear understanding of their own abilities, goals, and needs.
(3) People who advise: Students' top priority is someone who can help them plan, and there may not be advisors available who know both the individual student and the total curriculum well enough to furnish the help needed.

Curriculum areas standing out as most "useful" in terms of the present activities of AISD graduates are Mathematics, Language Arts, Vocational/Cooperative Education, Driver Education, and Business Education. Areas standing out as least "useful" in terms of present activities are the Fine Arts, Foreign Languages, and Homemaking.

College bound students have taken and earned eight more credits in academic areas than non-college students.

Non-college bound students have taken and earned five more credits in vocational areas than college bound students.

Students receive most of their information and advising from subject area teachers.

According to judgments by students and school staffs, subject area teachers <u>should</u> have the primary responsibility for advising students. Counselors should have nearly as strong a role.

All counselors and half the teachers who advise use the High School Information Guide to help students select courses.

Teachers who advise get their information from fellow teachers and their department heads, counselors, and course outlines.

Counselors who advise get their information from teachers and other counselors.

Ninth grade students report receiving the High School Information Guide, and that it is their most important source of information for choosing courses.

Students, principals, and secondary instructional coordinators believe course titles need to communicate more clearly.

Students believe course descriptions in the High School Information Guide are understandable, but school staffs believe they need improvement.

Half of our students do not use the four-year course planning forms from the High School Information Guide, and advisors do not use them in helping students select courses.

Most ninth-graders have their course choices reviewed by someone in junior high school, but only half the tenth through twelfth graders report having their choices reviewed for appropriateness.

RELEVANT FINDINGS REFERENCED:

Evaluation questions 21, 22, 23, 24, M-4, M-8, M-11

6. How can the junior high schools be assisted to improve the orientation of eighth-graders to the high school curriculum?

RELEVANT ORE FINDINGS:

High school principals and secondary instructional coordinators have, as their highest priority for improving junior high advising, providing junior high school teachers further training on the high school curriculum and advising. They also recommend helping students learn how to make intelligent decisions.

Our ninth-graders received and used the High School Information Guide in junior high school.

The High School Information Guide and their junior high subject area teachers were the main sources of information and advising on course choices for ninth-graders.

Twenty-eight percent of our ninth-graders did not attend the orientation conducted for them before high school started, but 73% of those who did attend reported it helped them at least a little.

Our ninth-graders, in their second month of high school, feel confident about their adjustment to high school.

Our ninth graders, in their second month of high school, report knowing why they are taking the courses they are in. However, their high school teachers believe half the ninth-graders do not know why they are taking the courses they are in, or how these courses relate to their future plans.

EVALUATION FINDINGS REFERENCED:

Evaluation question 25

7. Should AISD consider acting to increase the similarity of the same course taught in different schools by different teachers?

RELEVANT ORE FINDINGS:

There is high agreement among teachers at the different high schools on which content areas on the course outline are covered.

Our best estimate of coverage of course topics present on the outline in basic required courses, given our sampled examinations, is that half the outline topics are covered.

The content of sampled final examinations in the selected Social Studies and Science courses closely follows the course outlines.

The content of sampled Language Arts final examinations was half "review" material, not on the outline. However, there was good agreement among all teachers over including this material.

Approximately 75% of all final examination items require only that students select responses from among given choices.

Less than 10% of all final examination items require students to construct even a complete sentence.

EVALUATION FINDINGS REFERENCED:

Evaluation questions 26, 27, 28

III

PROJECT DESCRIPTION

A. PROGRAM DESCRIPTION

History and Background

In 1971, the 62nd session of the state legislature passed a law mandating the implementation of the quarter system for all Texas school districts. The law required districts to operate three quarters and to provide 180 days of instruction. The rationale for the law was both economic and educational. A fourth quarter could save tax money by utilizing the existing physical plant to meet increased enrollment without new construction. Also, it could give both business and students greater employment opportunities. Educationally, the quarter system could increase students' involvement in choosing their own plan of study and present a greater range of courses for selection.

Work on implementing the quarter system in the Austin Independent School District began in 1972 under a Secondary Study Committee. The district planned to use the quarter system as the organizational vehicle for curriculum revision aimed at individualization. A Quarter System Steering Committee was subsequently appointed. It established task forces of department heads and secondary instructional coordinators to develop the new curriculum.

By February, 1974, about 700 possible courses had been outlined. An intense effort was begun to write course descriptions, determine prerequisites and grade levels, set graduation requirements, and eliminate overlap among the courses. The result was a new curriculum designed to allow students to develop plans of study tailored to their individual needs and interests, while meeting the graduation requirements established by the State Board of Education and the Texas Education Agency.

Currently the Austin Independent School District offers a high school program of three quarters of free public education. These are three 12-week, 60-day sessions occuring within the traditional late-August to end-of-May school year. There is an optional fourth summer quarter which students may attend for tuition. This quarter offers the possibility of an accelerated graduation (the graduation requirements can be completed in three calendar years), remedial work, or enrichment.

AISD Curriculum

As stated in the High School Information Guide, a major goal of the AISD curriculum is to make available to students the widest possible range of course choices. A curriculum with a lot of student choice demands student responsibility. Students and their parents must "accept the challenge of the educational process...determining (the student's) school life."

The goal of a diverse curriculum and student choice is a reality in AISD. There are 780 courses potentially available for students to choose among. This includes 125 Language Arts courses and about forty courses each in Mathematics, Social Studies, and Science. The major vocational areas: Business Education, Homemaking, Industrial Arts, Vocational Cooperative Education, and Trade and Industrial Education, have forty to fifty courses each. Eighty-nine Fine Arts courses are available and 66 are available in Physical Education and Varsity Sports. The entire curriculum is presented in brief form in Figure III-2 on the next page.

Obviously each high school cannot offer the full curriculum. While the entire curriculum is not available, a diverse curriculum is still taught. The 27 elective quarter credits allow the students to take a variety of courses. Figure III-1 presents for each high school and each curriculum area, the number of courses offered for each quarter of 1976-77.

Curriculum Area	ANDERSON			AUSTIN			CROCKETT			L.B.J.			JOHNSTON			LANIER			McCALLUM			REAGAN			TRAVIS			TOTALS		
	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3
BUSINESS EDUC.	11	12	13	10	10	11	13	15	18	9	8	5	11	14	14	8	8	10	10	12	12	10	11	14	7	7	10	89	97	107
LANGUAGE ARTS	35	37	45	33	39	48	38	53	55	26	28	32	24	30	31	27	40	32	34	34	37	29	45	40	29	33	34	275	339	344
FOREIGN LANG.	20	17	18	17	19	18	15	15	15	18	18	18	11	9	10	17	17	17	14	14	15	17	17	18	16	16	17	145	142	146
HOMEMAKING	9	9	12	16	15	14	8	11	12	8	11	11	9	6	6	9	8	8	6	7	7	8	9	10	9	9	9	82	85	89
MATHEMATICS	19	20	21	17	21	22	18	25	27	19	23	25	18	23	23	21	22	25	16	16	19	18	18	18	17	19	18	163	187	198
SCIENCE	10	12	11	10	14	16	14	23	20	8	12	13	9	11	10	10	14	11	8	10	11	6	10	10	9	15	14	84	121	116
SOCIAL STUDIES	7	13	14	11	17	20	17	20	24	10	10	16	10	13	16	14	15	17	11	14	17	7	10	14	13	19	20	100	131	158
ART	10	12	12	11	11	11	5	8	9	7	8	8	9	10	10	6	7	7	6	5	5	5	10	8	9	12	12	68	83	82
INSTRU. MUSIC	11	11	11	7	6	6	2	3	3	9	7	7	4	4	4	3	4	4	5	5	5	7	8	8	2	3	3	50	51	51
CH/GEN. MUSIC	5	6	5	10	10	9	4	4	4	4	8	6	5	6	5	5	6	6	3	2	2	6	6	6	7	7	7	49	53	50
PHYSICAL EDUC.	26	24	27	14	20	19	25	33	38	20	21	20	19	19	20	17	22	21	21	25	28	15	19	25	16	17	21	173	200	219
VARISTY SPORTS	10	10	7	11	10	10	10	9	8	10	9	8	9	7	6	11	9	7	9	7	10	10	10	8	10	9	8	90	85	74
HEALTH	4	3	3	2	2	4	1	2	4	1	1	2	2	2	4	1	2	2	2	2	3	1	2	4	1	2	4	15	17	20
INDUSTRIAL ART	25	33	34	14	16	18	23	26	27	24	36	35	20	18	18	16	17	18	19	18	15	17	18	20	16	21	26	174	203	211
VOC.COOP. ED.	12	12	12	15	15	15	13	13	13	8	12	13	11	12	12	13	13	13	13	14	14	15	14	14	5	18	16	105	123	122
TRADE/IND. ED.	5	8	7	5	5	7	18	19	18	6	5	6	19	19	18	4	4	4	5	7	7	9	9	9	24	20	19	95	96	95
AGRICULTURE	2	1	1	-	-	-	2	2	2	-	-	-	-	-	-	6	6	6	-	-	-	-	-	-	-	-	-	10	9	9
A.F.Jr. ROTC	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	-	-	-	5	7	7
DRIVER ED.	2	2	2	2	2	2	2	2	2	1	2	2	3	1	1	1	1	1	2	2	2	2	2	2	2	2	2	17	16	16
AEROSPACE	-	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	2	-	-	-	1	-	-	-	-	-	-	3	5	3
ST HALL/ETC.	17	14	14	7	8	8	7	7	7	7	10	8	1	1	2	1	1	1	8	7	7	1	1	1	10	12	17	59	61	65
SPECIAL EDUC.	5	6	7	5	2	2	7	7	7	6	6	12	19	19	22	22	10	26	6	8	8	14	14	15	3	2	3	87	74	102
TOTAL BY QUARTER FOR ALL AREAS																												1938	2182	2292

Figure III-1: AISD HIGH SCHOOL CURRICULUM AREAS WITH THE NUMBER OF QUARTER COURSES OFFERED AT EACH HIGH SCHOOL FOR EACH QUARTER, 1976-77.

AREA	N
LANGUAGE ARTS	125
Language	17
Composition	11
Literature (1 * *)	33
Reading	12
Creative Writing	3
Speech	9
Drama (1 * *)	12
Humanities	4
Journalism (6 *)	17
Media Communication	7
MATHEMATICS	45
Fundamentals of Math	10
Introductory Algebra	6
Algebra	9
Geometry	3
Computer Math	3
Advanced Math	10
Math of Consumer Economics	4
SOCIAL STUDIES	41
World Geography	5
World History	8
American History	9
Government	5
Economics	2
Psychology	2
Sociology	2
Advanced Courses	8

AREA	N
SCIENCE	38
Physical Science	6
Biology	10
Physiology	3
Earth Science	5
Chemistry	6
Physics (1 * *)	8
BUSINESS EDUCATION	52
General business	5
Bookkeeping	9
Shorthand	7
Typing	8
Bilingual Office Practice	3
Other offerings[a]	20
FOREIGN LANGUAGES	75
French	21
German	10
Latin	14
Classical Civilization	6
Spanish	18
Beginning Greek, Russian	6
HOMEMAKING	41
Useful homemaking[b]	20
Gainful homemaking[c]	21
ART (6 *)	16

AREA	N
INSTRUMENTAL MUSIC	34
Band (3 * *)	15
Orchestra	13
Ensembles (6*)	6
CHORAL AND GENERAL MUSIC	39
Choral Music	18
General Music	21
PHYSICAL EDUCATION	54
VARSITY SPORTS	12
HEALTH	5
INDUSTRIAL ARTS	48
Independent courses	4
Industrial crafts (3 * *)	8
Drafting (1 *, 3 * * * *)	10
Electronics (1 *, 1 * * * *)	5
Graphic Arts (1 * * * *)	2
Metal working (2 * *, 1 * * *)	4
Photography (1 *, 1 * *)	3
Industrial Plastics	4
Power technology	6
Wood working (1 * * * *)	2
VOCATIONAL EDUCATION/COOPERATIVE EDUCATION (1 *, 7 * *)	44
TRADE & INDUSTRIAL EDUCATION (9 * *)	51

AREA	N
AGRICULTURE	18
AF ROTC	13
DRIVER EDUCATION	2
AEROSPACE	2
STUDY HALL, BIBLE, & TEACHER EDUCATION	5
SPECIAL EDUCATION	37
Language Arts	9
Social Studies	6
Science	6
Mathematics	9
Homemaking (3 * *)	3
Vocational Study	4
TOTAL (see notes)	780

[a] Includes Business Law, Business Management, Advertising, Office Procedures, Business Machines, and Business Communication
[b] Courses #2511 (Food, nutrition, management IA) through #2839 (Consumer Education B).
[c] Courses #2914 (CVAE-Home and Community Services IA) through #2939 (Food Service IIC).

Figure III-2: AISD HIGH SCHOOL CURRICULUM AREAS WITH QUARTER COURSES OFFERED. Reference for this listing is the "1976-77 High School Information Guide." Courses listed in the Information Guide with a number of asterisks (*) may be continued for credit with the content changed. The number of courses with specified numbers of possible continuations is indicated in the parentheses but is not reflected in the N. Also courses listed in the Information Guide with a # sign must be taken for 3 quarters to receive credit. On this list these courses are counted as 3 quarter courses.

Between 200 and 300 courses were offered in each high school each quarter this year. The average number of courses offered in an Austin high school, in this year's winter quarter, for example, was 242 courses. Not only is this a relatively large number of courses, but it has grown over the two years of the quarter system. The increase in average number of courses per high school this year was 17, 26, and 6 for fall, winter, and spring quarters respectively. Figure III-3 presents this data. Based on 1975-76 data we estimate that between 60 and 80 percent of the total available courses are presented during the year at each high school. That is some 400 to 600 courses. The actual number depends heavily on the high school's size.

SCHOOL	COURSES OFFERED					
	QUARTER 1		QUARTER 2		QUARTER 3	
	75-76	76-77	75-76	76-77	75-76	76-77
Anderson	205	245	232	264	259	279
Austin	183	218	203	243	242	251
Crockett	197	243	251	298	279	313
LBJ	192	201	174	235	239	247
Johnston	159	213	207	224	216	232
Lanier	213	213	213	228	241	236
McCallum	188	198	211	209	217	225
Reagan	212	202	223	238	266	249
Travis	229	205	235	243	279	260

Figure III-3: THE NUMBER OF COURSES OFFERED BY EACH HIGH SCHOOL FOR EACH QUARTER OF THE 1975-76 AND 1976-77 SCHOOL YEARS.

Of course all these available courses are not taken by everyone. We conducted an "earned credit survey" to get an idea of what courses are actually taken. By the end of their winter quarter, AISD seniors had earned an average of 59.9 credits of the 63 required for graduation. About 34.4 of these credits were in the required academic areas, where 29 credits are required. This indicates that about 5.4 elective credits had been earned in the required academic areas.

For Health (two quarter courses required) no elective credits had been earned. For Physical Education (five quarter courses required) we estimated, based on the earned credit survey study and our work on course enrollments, that five quarter credits had been earned. However, because Physical Education requirements may be waived for certain substitutions (e.g. band, varsity sports) we could not determine how many elective Physical Education courses were taken.

About 18.7 quarter credits had been earned in the elective areas, of the 27 required. The 5.4 elective credits from the required academic areas yields a total of about 24 elective credits. That leaves the three courses spring quarter seniors are enrolled in.

The "earned credit survey" results agreed very closely with actual enrollments presented in Figure III-4 below. Presented along with these data is the distribution of grades earned in the various curriculum areas. In the required academic areas the percentage of A's and B's granted is 51%, and the failure rate is 17%. Two-thirds of the elective areas have 10% more A's and B's and one-third have 20% more.

CURRICULUM AREA	QUARTER CREDITS REQUIRED	ENROLLMENTS [a]	DISTRIBUTION OF EARNED GRADES [b]				
			%A	%B	%C	%D	%F
REQUIRED AREAS	(36)	(201,232)					
English Language Arts	9	50,974	23	32	26	4	14
Social Studies	8	44,565	23	28	27	5	17
Mathematics	6	40,252	19	28	30	3	20
Science	6	34,298	23	28	25	5	17
Physical Education	5	22,954	44	29	15	5	10
Health	2	8,189	28	29	24	6	12
ELECTIVE AREAS	(27)	(90,703)					
Business Education	0	11,864	35	33	22	1	8
Foreign Language	0	11,635	45	32	18	0	4
Homemaking	0	6,281	35	34	14	3	8
Art	0	4,741	35	38	18	2	6
Instrumental Music	0	5,066	57	28	10	1	3
Choir/General Music	0	2,764	61	28	8	1	2
Varsity Sports	0	8,248	91	7	1	0	1
Industrial Arts	0	12,878	21	32	28	3	16
Coc. and Coop. Ed.	0	5,338	35	40	16	2	6
Trades and Indus. Ed.	0	1,407	28	37	26	2	6
Agriculture	0	599	21	44	25	1	8
A F Jr. ROTC	0	325	13	21	44	12	11
Driver's Education	0	3,519	9	13	9	0	4
Aerospace	0	174	18	35	29	5	12
Study Hall/etc.	0	12,082	32	30	22	7	11
Special Education	0	3,180	25	34	24	4	12
GRAND TOTAL	(63)	(291,935)					

[a] Total number of students (all grade levels, all high schools, all quarters) enrolled

[b] Based on grades granted first two quarters only (n=195,932 earned grades)

Figure III-4: ENROLLMENT AND EARNED GRADE DISTRIBUTIONS BY CURRICULUM AREA.

Staffing

To manage this complex high school curriculum the district has an administrative staff consisting of a director of Secondary Education, an assistant director, nine principals, and approximately 20 assistant principals, in addition to other support staff. To implement the curriculum 21 secondary instructional coordinators and four interns work with a staff of nearly 1000 teachers and department heads.

Budget

AISD budgeted approximately $22.4 million for the high schools (directly and indirectly) for 1976-77. About $14.1 million, or 63% of this is for salaries for personnel in the schools; about $3.9 million, or 17% is spent on plant and operations; about $4.1 million, or 18% is central support to the schools; and about $0.4 million, or 2% is the per student allocation to the schools. Figure III-5 below shows the expenditures budgeted for 1976-77, by category, with examples:

CATEGORY	EXAMPLES	EXPENDITURES
Personnel in the schools	Principals Librarians Teachers Office Staff	$14,080,420
Total per student allocations to the schools	Supplementary texts Library supplies Capital outlay Newspapers in the schools	373,740
Central Administration--administrative support	Director of Secondary Education Director of Career Education Special Education Office Staff ORE Superintendent's Office	1,625,564
Central Administration--regular & special education program support	Quarter system materials Instructional supervisors Project reality Special Education Resource System	1,502,727
Central Administration--other support	Athletic Office Developmental Programs Admin. Secondary Counseling Admin. School Psych. Interns	980,795
Plant & Operation	Pupil Transportation Mail room School plant-maintenance Printing Real estate Purchasing Security	3,881,906
	TOTAL	$22,445,152

Figure III-5: BUDGETED DISTRICT EXPENDITURES FOR AISD HIGH SCHOOLS FOR 1976-77. FEDERAL FUNDS ARE NOT INCLUDED.

School Characteristics

The quarter system program and expanded curriculum are delivered through nine comprehensive high schools ranging in student membership from about 1300 to 3000. Each employs from about 70 to 150 teachers. For the third six weeks of 1976-77, percent of attendance ranged from 84% to 92% of the students. Only one high school has a "large" percentage of students from low income families (63%); the other eight high schools range from 5% to 26%. Four high schools are near 80% Anglo in student membership; one high school is predominantly minority, while the remaining four high schools have greater ethnic diversity. These 1976-77 student characteristics are close to the 1975-76 data, but may change with the possible onset of busing. Figure III-6 shows individual school characteristics for 1976-77 in the nine high schools. Physical facilities of Austin's high schools vary somewhat. In addition to self-contained classrooms, four of the high schools have large open areas. Some schools are overcrowded and use temporary buildings.

SCHOOL	NUMBER OF TEACHERS (EST. ± 5)	THIRD SIX-WEEK PERIOD OF 1976 - 1977			MARCH, 1977 % STUDENTS FROM LOW INCOME FAMILIES	ETHNICITY AS OF OCT. 1976		
		ADM	ADA	% ATTENDANCE		%BLACK	%MEXICAN AMERICAN	% ANGLO OR OTHER
Anderson	112	2352	2160	92%	5.45	9%	3%	88%
Austin	104	1873	1688	90%	19.79	12%	27%	61%
Crockett	148	3052	2747	90%	7.12	7%	11%	82%
LBJ	92	1686	1528	90%	15.74	28%	9%	63%
Johnston	85	1310	1129	86%	63.46	30%	68%	2%
Lanier	111	2125	1908	89%	16.32	14%	8%	78%
McCallum	76	1407	1238	87%	10.13	6%	16%	78%
Reagan	92	1740	1504	86%	26.08	27%	11%	62%
Travis	97	1857	1566	84%	16.81	7%	51%	42%

Figure III-6: HIGH SCHOOL CHARACTERISTICS: 1976-77 ADM, ADA, PERCENT ATTENDANCE, PERCENT LOW-INCOME AND PERCENT ETHNICITIES FOR AISD.

B. CONTEXT DESCRIPTION

This final report presents an evaluation of the revised high school curriculum first implemented by AISD in 1975-76 along with the Quarter System. As far as possible, the evaluation rests on objective data such as student achievement test scores and attendance records, and on objectively collected judgment data. However, there are many environmental factors which make up the "context" in which the program operates, which cannot be objectively evaluated. These factors determine, to a great degree, the possibilities of the high school curriculum.

The context within which any educational system operates is as complex as the society as a whole, and forces act upon the school system from within and from without. What does the literature suggest are these factors? What are the concerns of parents? What are the areas of administrative concern? What have our Board of Trustees set as priorities?

Literature

The amount of information available is massive. The 1975-76 Quarter System Evaluation prepared a complete review of the literature on quarter system programs. Some more recent material is presented below:

1 In reviewing nearly 100 studies comparing curricula, Walker and Schaffarzick conclude that student achievement mirrors the content of the courses they take. Different curricula produce different patterns of achievement--patterns generally related to the differences in the content of curricula. (Comparing Curricula, Review of Educational Research, 1973, 44 (1), 83-113)

2 Currently several major studies and reports are urging new directions for the comprehensive high school. The need for change is evidenced in various research findings from local school districts. Employers are not satisfied with the quality of high school graduates; neither are colleges and universities. Legislators have acted to strengthen the impact of high school education. Among the many recent actions of the State Board of Education has been the mandate for a quarter system which would result in high school curriculum improvement by increasing alternatives for pupils. (TASD, School Curriculum Design for the 1980's, Nacogdoches, Texas: TASD, 1974, 85 ff.)

3 Back-to-basics advocates are citing a $1.8 million, three-year, USOE study conducted by the American Institutes for Research which says there is no correlation between innovative educational techniques and student achievement. (Austin-American Statesman, January 1, 1977)

4 The report of the "Special Task Force on Graduation Requirements" of the NAASP recommends the high school diploma "should certify that the graduate possesses the base line skills and knowledge essential to effective adult citizenship." They recommend competency measures, preferably developed statewide, in reading, writing, mathematics, and the American civilization. (Education Digest, January 1976)

5 While 80% of the nation's 30-year olds are satisfied with their careers, 43% feel their high school made only an "adequate" contribution in preparing them for that career and 20% say it was "of little or no value." (Project TALENT findings reported by American Institutes for Research under the auspices of the NIE and reported in November 17, 1975, Education USA)

6 Concern focuses on the attitudes of high school graduates about their preparation. High school graduates had better attitudes toward their elective vocational courses than their required academic courses. Among the academic courses, they cited English and Mathematics areas least in need of expanded offerings. As a group, Mathematics teachers get one of the least favorable ratings as teachers. Nonetheless, when asked what turned out to be the most valuable curriculum areas to them, Mathematics and English were top choices. These same students cited the most salient characteristic of a good teacher as the ability to communicate with students and create interest; boredom or lack of interest is the major reason for dropping out. (Digest of Final Report of Texas Education Product Study, TEA, 1973)

Parent Concerns

Traditionally the schools have commanded respect from parents. Today, however, confidence in educational systems has declined along with, or ahead of, the decline in confidence in other institutions. Parents have begun to question the quality of the public education being provided by their tax dollars to their children.

Some parents focus this criticism on the situation in which learning is to occur - the classroom and classroom order:

Standards needed

As of September this year, I felt the necessity to remove my children from the Austin Independent School District system and to place them in a private system.

Our educational leaders do not have the controls necessary to provide our children with the quality education needed to live in the world as we know it. The school system must be disciplinarian in the absence of parents. I realize that my children cannot achieve their maximum potential without discipline. Standards need to be set — one set of standards for all of us.

I believe it is worth mentioning that my 10-year-old son came home from his new school and casually remarked, "Mother, I learned more in one day than I did in a whole week at that other school."

Source: Austin-American Statesman 10-6-76
Letters to the Editor

Other parents are concerned about what is taught:

'Innovations' waste kids' time, brains

Your Jan. 1 editorial, "Education: The basics," was a timely and much-needed comment.

Torrents of public money have been expended for the "innovations" you mentioned. The waste of money is nothing compared to the waste of our children's intellect and time.

Until the glare of publicity is played upon the dark corners where they operate, school administrators will continue to employ the wasteful and worthless "innovations" you condemn in your editorial. Many of these "innovations" are worshiped as totems even today in the Austin Independent School District, for example. Open classrooms, team teaching, peer teaching, individualized guided education — they are all there. They will continue to be employed until public opinion forces AISD from the "innovative" course it chose to pursue in the face of warnings by other, more practical and experienced educators.

When the public schools have performed so dismally their primary task of teaching basic skills, it is the height of foolishness to entrust them with the instruction of our children in such intimate matters as morals, values and "parenting."

Your editorial is an excellent beginning on the road back to sanity in education.

Source: Austin-American Statesman 1-6-77
Letters to the Editor

One Austin ISD parent has attempted to apply the Supreme Court decision which prohibits the teaching of religion in public schools to other subjects, materials, and teaching methods. Areas which parents disapprove of are as diverse as sex education, ethnic studies, human relations training, and teaching methods.

Parents have even instituted suits against schools because their children, who have diplomas, are illiterate.

Judge William Wayne Justice in 1974 in Texas ruled the "juvenile delinquents sent to (State) correctional schools have a right to rehabilitation, and the State has an obligation to provide it" (4/77 Austin-American Statesman). Some interpret this to mean schools have a legal obligation to provide a program in which each student learns what he needs to learn.

Private schools committed to teaching "basic skills" have sprung up across the nation, some disappearing almost immediately, while others seem to succeed.

Teacher Concerns

Across the country, teachers have made public their desire for quality education and improved working conditions by opposing their administators and school systems. Teachers' unions have grown and their members are striking for better working conditions. While administrators consider teacher evaluation and accountability, teachers press a broad range of demands. Some believe teachers have gone too far, others not far enough.

AISD Concerns

As in other districts across the nation, internal and external forces act on AISD in ways that influence curricular decisions. In December, 1976, the U.S. Supreme Court sent the Austin school desegregation case back to the U.S. 5th Circuit Court of Appeals for reconsideration. Again the district is left unsure whether increased busing will be mandated by the courts. Busing students from kindergarten through twelfth grade remains a possibility.

Secondary principals meet twice a month to discuss issues that impact the high schools. During 1976-77, the principals have discussed, among many other subjects, applications of the district's discipline policies in the high schools, the implications and implementation of the minimum competency requirements, the logistics of conducting nine graduations, concerns about the prospects of teacher evaluation, and procedures for reporting the grievances of their staffs.

Secondary instructional coordinators meet weekly throughout the school year, and the High School Curriculum Evaluation staff have worked closely with the group in planning, carrying out, and reporting this evaluation. During 1976-77 the coordinators planned and carried out with the Department of Student Development a workshop for counselors. This was designed to improve communication and help counselors become more familiar with the revised curriculum so they could advise students more effectively. The coordinators have discussed, among many other topics, the mechanics of textbook adoption; reading programs now in effect in the secondary schools; the problem of specifying how students may earn credit by examination; the legal implications and necessities in any evaluation of teachers; the expected impact on various curriculum areas of minimum competency requirements; and the entire area of Junior High School curriculum.

Board Priorities

In May, 1976, the AISD Board of Trustees met in open session to establish priorities for the 1976-77 school year. The board considered a long list of potential priorities and selected four major priorities. These priorities as stated were:

1. "Students will demonstrate improved performance in basic skills areas of reading and math."

2. "Since teacher qualifications appear to have a strong relationship to student learning, the assurance of highly competent teachers is a high priority."

3. "Urban school systems today remain unable to break the relationships between low socio-economic status and achievement. AISD will study its past efforts to break this pattern...and arrive at a comprehensive plan for improving the performance of Low SES students."

4. "Develop a desegregation plan which will be acceptable to the groups concerned, aid in achieving improvement in basic skills and Low SES student achievement, and provide positive interethnic attitudes."

For 1977-78, the Board of Trustees on May 27, 1977, adopted three tentative priorities. These three adopted are:

1. "Continued concentration on basic skills."

2. "Attention to the achievement of low socio-economic status (SES) and minority students."

3. "Emphasis on evaluation of staff."

Teacher competency AISD issue

Trustees of the Austin Independent School District grappled with educational priorities Wednesday, finally tentatively setting three for 1977-78.

Administrators had recommended only two priorities — concentration on basic skills (reading, writing and mathematics) and improvement in the achievement of poor and minority students — but board members dredged up that old topic of teacher and principal competency.

The study session was set up as guidance for administrators. Teachers, staff and the public will have a chance to comment on the proposals before the priorities are adopted at a third meeting.

Source: Austin-American Statesman 4-28-77

Back to basics

Hard on the heels of local reports of declining literacy among high school seniors comes the news from Dallas that Southern Methodist University has gone to teaching high school English to its freshmen and sophomores.

There always have been bonehead English courses at many colleges and universities, but SMU is responding to a monumental growth of unprepared scholastics. The university has revamped its entire Basic English program for the first and second year students. The previous program was over the heads of students who had no understanding of spelling, grammar or punctuation.

College is not the preferred place to learn the basics. College professors shouldn't have to do the high school English teacher's job, although SMU is to be commended for dealing with the deficiency.

If the public schools can't teach English, the kids who don't go on to college will never learn the language: And that's most of them.

Source: Austin-American Statesman 3-3-77

Student Achievement

Underlying many of the statements of concern in various areas of education is the basic fact that student achievement scores are declining.

1 Annegret Harnischfeger and David E. Wiley in "Achievement Test Score Drop. So What?" writing in the March, 1976, Educational Researcher state:

> Beyond doubt...achievement test scores have been declining for about a decade in all grades from five upwards. Score declines are more pronounced in higher grades and in recent years. These are more severe for tests probing verbal than mathematics achievements. These are the facts and they describe a national phenomenon.

2 A Hudson Institute report by Frank Armbuster and others documented a decline in school district achievement tests which is similar to the decline in the ACT and the SAT. The tests studied were those that tested pupils' abilities to read, write, and perform fundamental mathematics. (Wall Street Journal, 7/20/76)

Competency Requirements

1 By a 2-to-1 margin, the American public thinks high school seniors should be required to pass a standardized examination before they would be eligible to receive a diploma. These 1976 findings are from Gallup's 8th Poll of Attitudes Toward Education.

Question: "Should all high school students in the United States be required to pass standardized nationwide examination in order to get a high school diploma?"

FAVOR	OPPOSE	NO OPINION
65%	31%	4%

2 Even more important than data and public awareness is legislative action. More than a dozen states have adopted, or are seriously considering adopting, competency requirements for graduation. Arizona currently requires competency testing for graduation; students must demonstrate a ninth-grade reading level. Oregon's and Virginia's programs will affect 1978 graduates; Oregon will allow each district to set the competencies, but Virginia will require a statewide standard. New York's requirements will become effective in 1979. Many individual cities have adopted their own requirements; Denver has a 15-year history of competency testing.

3 A San Antonio State Representative keeps working for a program that would require students to demonstrate basic competencies. He cites findings that one of every five adults in Texas is considered functionally incompetent, fifty percent of those persons entering junior or community colleges cannot read or compute math problems on a first year college level, and fourteen percent of Austin's high

> school seniors cannot read beyond a eighth grade level...He believes high school diplomas have no meaning and proposes statewide testing to insure skill promotion, not social promotion (12/10/76 El Paso Times).

The AISD Board of Trustees has adopted a minimum competency requirement in reading and mathematics which students must meet in order to graduate, unless their parents sign a letter stating that they understand their children have not met the requirements.

Long range consequences of this policy are still unknown. As the schools modify their curricula, different problems, needs, and demands will emerge. As a society modifies its institutions, the institutions also change the society.

C. EVALUATION DESCRIPTION

Background

History. Evaluation activities conducted by the Office of Research and Evaluation have been changing. The office was first established in 1973-74 under an ESEA Title III grant to design and establish a model evaluation capability within the district. Each year the office has initiated improvements in its procedures to better serve the students, parents, teachers, and administrators of AISD. Our district-supported evaluations of educational programs have increasingly deemphasized programs and program objectives and increasingly emphasized district priorities and decision questions. There has been a parallel shift away from service to specific programs and toward accountability of the district as a whole. With limited money for evaluation (less than 0.5% of the district budget) careful targetting of evaluation resources is essential.

Within this context, one of the first major expenditures of district funds on evaluation was to support the Quarter System Evaluation in 1975-76. This evaluation is well documented in the office's Report Files. The 1976-77 High School Curriculum Evaluation as authorized by the Board built upon the Quarter System Evaluation and the history of the developing evaluation office. Probably of all our 1975-76 evaluations the Quarter System evaluation had been the most decision-question oriented. That is, instead of eliciting objectives from the district staff implementing the Quarter System, the Quarter System evaluation elicited decisions regarding the Quarter System--decisions which the district would have to make. The High School Curriculum Evaluation carried this tradition even further.

The High School Curriculum Evaluation started with the Quarter System decision questions and others suggested by the literature. We interviewed all high school principals, many coordinators, and the central office administrators involved with the high schools. They reviewed these decision questions. Areas of decision-making were added, modified, or deleted. Several intensive weeks were spent in arriving at a consensus on areas to be included in our design. The result was a shift in emphasis away from the implementation of the Quarter System per se to a broader study of the curriculum itself. The final design involved much negotiation and compromise. Right up to the time administrators signed-off on the design, decision questions were being added and subtracted to meet the realities of collecting data in the schools, the needs of the district, and available evaluation resources.

Perhaps the best way to view the High School Curriculum Evaluation is historically. The elicitation and discussion of decision questions moved our design out of the arena of a tight program evaluation and into the area of addressing systemwide questions that will be long-standing. Thus, subject to Board approval, we are planning to continue next year some of the major data collection of the High School Curriculum Evaluation:

- Former Student Questionnaire
- High School Course Enrollments
- High School Earned Grade Distributions
- SAT Reporting
- Survey of Study Habits and Attitudes

Funding and Personnel. Because the Needs Assessment and Program Evaluation budget within the Office of Research and Evaluation received additional federal funds in 1976-77, actual resources available to the High School Curriculum Evaluation exceeded our original plans. This allowed us to address some additional evaluation questions. Without correcting for resources dedicated to ORE as a whole and lost as direct resources to the High School Curriculum Evaluation, the funding and personnel for the 1976-77 budget year is approximately as in Figure III-7. The total cost of about $48,000 compares to $58,000 for the 1975-76 Quarter System Evaluation. The savings represent trimming the original design down to essentials.

PERSONNEL COSTS		OTHER COSTS	
CATEGORY	EXPENDITURE	CATEGORY	EXPENDITURE
Senior Evaluator	17,443	Data Processing[a]	1,000
Eval. Asst. (2)	16,871	Telephone	262
Secretary	6,285	Reproduction[b]	4,500
Part-time coding	750	Testing Materials	200
		General Supplies	350
		Indistrict Travel	575
TOTAL	41,349	TOTAL	6,885

[a]If we had to pay Data Services for this service, it would cost about $7500.
[b]Because it costs nearly $2000 for final reports

Figure III- 7: PERSONNEL AND OTHER COSTS FOR THE HIGH SCHOOL CURRICULUM EVALUATION, 1976-77.

Areas of Inquiry

The High School Curriculum Evaluation collected a wide range of data from a large number of data sources. Seven general areas of inquiry are presented below along with a brief synopsis of the type of data collected.

Student performance. Major emphasis was placed on this area which included longitudinal data on student achievement as measured by the Sequential Tests of Educational Progress, the Scholastic Aptitude Test (SAT), and the American College Testing Program (ACT). Further data included the distribution of grades given in high school courses as well as attitudes toward school, teachers, coursework, and study as measured by the Survey of Study Habits and Attitudes, the Student Questionnaire, and the Former Student Questionnaire. Percent attendance and school-leaver rates were also calculated. We also collected judgments of relevant staff on student performance. Finally, student post-graduation goals as reported by students, former students, and counselors of seniors were collected.

The advising process. We continued major questions on advising from the 1975-76 Quarter System Evaluation, including who advises and who should advise students, whether students are adequately advised, and whether course selections turn out to be appropriate. We added specific questions on how students use the High School Information Guide, how course planning forms are used, and where personnel who advise get their information. In addition, we examined the advising process in the junior high schools. On the order of 10 to 20 questions on advising were collected from all the relevant actors (except parents) in the advising process: students, teachers, counselors, coordinators, and principals.

Graduation requirements. We projected best estimates of the effect of the adopted minimum reading and mathematics competency requirements, compared AISD achievement scores to the national sample, investigated what courses students actually take and how elective credits are used, and studied how teachers view the curriculum of their major teaching area.

Organizational roles. We studied in great detail the duties, responsibilities, priorities, and perceived effects of high school counselors. We also collected judgments on the "costs" of expanded curriculum implementation, whether school staffs judge the quarter system an improvement, and whether the benefits of the expanded curriculum could be retained in a return to the semester system of organization. We also asked school staffs about role satisfaction and about school conditions conducive to learning.

Course content. We answered questions about whether course outlines are covered, how much similarity in content exists among teachers of the same course, and how complex a written response is required of students on final examinations.

Year-round schooling. We asked principals and coordinators about relative costs and benefits of a full summer quarter and we asked students and staff if they would voluntarily participate in a summer quarter.

One way to grasp the evaluation design is to study the following tables (Figure III-8). These present for each information source in our design the sample, time of collection, and a brief description of the area.

INFORMATION SOURCE	SAMPLE	WHEN COLLECTED	DESCRIPTION
Sequential Tests of Educational Progress	All high school students present for testing.	April, 1976 April, 1977	Provides achievement data for AISD students in the areas of Mathematics computation, Mathematics basic concepts, Reading, Spelling, Capitalization and punctuation, English Expression, Science, and Social Studies for comparision with a national sample.
Survey of Study Habits and Attitudes (SSHA)	About 350 students at each grade level in randomly selected Social Studies classes.	March 21-31, 1977	Tells us what students think about school, teachers, course work, and study. This is the second year in a longitudinal design to present general student attitude data and report student reaction to specific questions on study habits and attitudes. ORE is planning to continue to report this data at eleventh grade in future years.
Scholastic Aptitude Test (SAT)	A self-selected sample of 1975-76 seniors (N=1489 [44.4%]).	1975-76	Analysis of the scores of about half the AISD seniors, in comparision with over 1 million national scores; provides information on how well AISD is preparing college-bound students. ORE is planning to continue to report these data yearly.
American College Test (ACT)	A self-selected sample of 1975-76 seniors (N=768 [24%]).	1975-76	Provides some data to supplement the SAT data, for those college-bound seniors who took these tests in 1975-76.
Earned credits	A random sample of about 200 of our 1976-77 seniors.	Spring, 1977	This sample gives us estimates of what required and elective curriculum areas students are taking courses in, and indicates the differences between courses taken by college-bound and non-college bound students.
Course enrollments	All high school students' course records for all quarters (N=291,935 course records).	End of first and second quarters and end of fifth six weeks	Provides for the first time the exact number of students (by sex and ethnicity) who have enrolled in each course, subarea, and area of the high school curriculum. These data are provided quarterly to the administration, and the reports are planned to be part of the ongoing reporting system of ORE.
Earned grades	All high school students' course grades for the Fall and Winter Quarter (N=195,466 earned grades.	End of first and second quarter	This is the first time earned grades in all high school courses have been compiled, and percentages of each grade calculated for each course, subarea, and area of the high school curriculum. This is planned for continuation in 1977-78 as part of our longitudinal data base.

Figure III-8: INFORMATION SOURCES FOR THE HIGH SCHOOL CURRICULUM EVALUATION. (Page 1 of 3)

INFORMATION SOURCE	SAMPLE	WHEN COLLECTED	DESCRIPTION
Graduation requirements	The 1975-76 CAT and STEP achievement scores for all students tested projected for the class of 1978-79.	Spring, 1976	This is an analysis of CAT and STEP scores used to provide the administration with estimates of the number of students (by ethnic group) who will have failed to meet the minimum competency requirements for graduation at the time in their high school careers that those requirements specify that they must begin taking specific reading and math courses beyond the normal requirement or file a letter stating their intent to graduate without demonstrating the competence.
Percent attendance Average Daily Membership Graduation rate	All AISD high school students.	June, 1977 previous years available	Provides data on average daily attendance for AISD high schools for year-to-year comparisions.
School leavers	All students who leave AISD high schools, neither transfering nor graduating.	June, 1977 previous years available	Provides data on students who leave school other than as transfers or graduates, for comparision from year-to-year.
Counselee Questionnaire	36 Social Studies sections representating grades 10, 11, and 12 in all high schools. (About 800 students.)	Dec. 6-10, 1976	Provides data from students on which counselor services they use, how often they talk to counselors, and whether talking to counselors is judged helpful.
Student Questionnaire	About 950 students in 51 Language Arts sections representating grades 10, 11, and 12 in all high schools.	March 21-25, 1977	The questionnaire provided information from students on course selection and advising and on students' attitudes toward school and the quarter system.
Student Advising Checklist	28 randomly selected sections of 9th grade OLA at 7 high schools and 10 randomly selected 9th grade advisories at 2 high schools. (About 750 students.)	October 11-15, 1976	Provides data from ninth graders about their orientation in junior high to the high school curriculum, their use of the Information Guide, and where they received information about courses.
Former Student Questionnaire	A random sample of about 250 1975-76 seniors.	Feb. 2-April 1, 1977	The obtained sample for the questionnaire was representative of the 1975-76 senior class, and with two follow-up efforts the return rate was 78%. It provides information on current educational, work, and family status and the graduates' views of the adequacy of their high school preparation.

Figure III-8 Continued: (Page 2 of 3)

INFORMATION SOURCE	SAMPLE	WHEN COLLECTED	DESCRIPTION
Final Examinations	Examinations from 2 sections per school of one Language Arts, Social Studies, and Science course (N=54 finals).	End of first quarter	Provides information on how completely course outlines are covered, how much similarity of content there is among different teachers of the same course, and how much complexity is required on the written answers to examination items.
Principal/Coordinator Interviews	All AISD high school principals and secondary instructional coordinators.	February, March, 1977	Provides information on student advising, the Information Guide, counselor roles, the perceived costs & benefits of the quarter system and expanded curriculum, and the problems of the quarter system.
Teacher Questionnaire	All AISD high school teachers completing the instrument (N=789).	January, 1977	Provides data on the advising of students, the revised curriculum and time lost; and teacher's attitudes toward their roles and the quarter system. An 83% return rate was achieved.
Counselor Questionnaire	All but one of AISD's high school counselors including vocational counselors.	January, 1977	Provides information on counselors' perceptions of their own roles, the amount of time they do and should spend on various activities, as well as questions on student advising & year-round schooling. The return rate was 98%.
Non-teaching High School Personnel Questionnaire	All AISD non-teaching high school personnel: librarians, deans, assistant principals, secretaries, registrars, clerks, and aides completing the instrument (N=154).	January, 1977	Provides information from "professional" and "non-professional" high school non-teaching personnel on student advising, year-round schooling, the quarter system and revised curriculum. The return rate was 88%.
Budget	1976-77 Preliminary Budget and budget update.	Spring, 1977	Provides the expenditures and percentages of expenditures for various categories of district money used to support the high schools.

Figure III-8 Continued: (Page 3 of 3)

IV

EVALUATION FINDINGS

A. EVALUATION QUESTIONS

1. Has the districtwide median achievement score for each STEP subtest increased in 1976-77 over 1975-76?

ANSWER: Yes. However, the magnitude of the increase is different for different STEP subtests and different grade levels. Also, the lowest 25% of AISD students have not shown the increase the AISD population as a whole shows. Furthermore, the cause of the increase is not the quarter system and the revised curriculum, but probably a group of factors operating in the secondary schools and perhaps in the broader society.

SUPPORTIVE DATA:

Figure IV-1 presents the eight STEP subtest median percentiles for 1976-77 compared with 1975-76 for AISD. There is a separate graph for each grade level. Figures IV-2 and IV-3 present the STEP grade level median percentiles for 1976-77 compared to 1975-76. There is a separate graph for each subtest. (The data on which these graphs are based is provided in Figure IV-4.)

There is a Definite Increase in STEP Scores from 1975-76 to 1976-77

There is not one case out of 32 (four grade levels times eight subtests) where the 1976-77 AISD STEP median percentile score decreased. The distribution of increases in the median percentile scores for the 32 cases are: 0 or 1 (9 cases), 2 or 3 (10 cases), 4 or 5 (10 cases) and 6 or more (3 cases). This corresponds to an increase of one to two items in the raw score.

The Increases Differ in Magnitude for Different Subtests

We can table the median increase for separate subtests (the median of the distribution of increases in median percentiles from 1975-76 to 1976-77 across all four grade levels). There is wide variation in the magnitude of the increase for the separate subtests.

STEP SUBTEST	MEDIAN GAIN	RANGE OF GAIN
Science	4.5	2 to 8
Reading	4	3 to 6
Capitalization and Punctuation	3.5	0 to 5
Math Computation	3	0 to 4
Social Studies	2.5	0 to 5
Math Basic Concepts	2	0 to 6
Spelling	1.5	0 to 5
English Expression	1	0 to 4

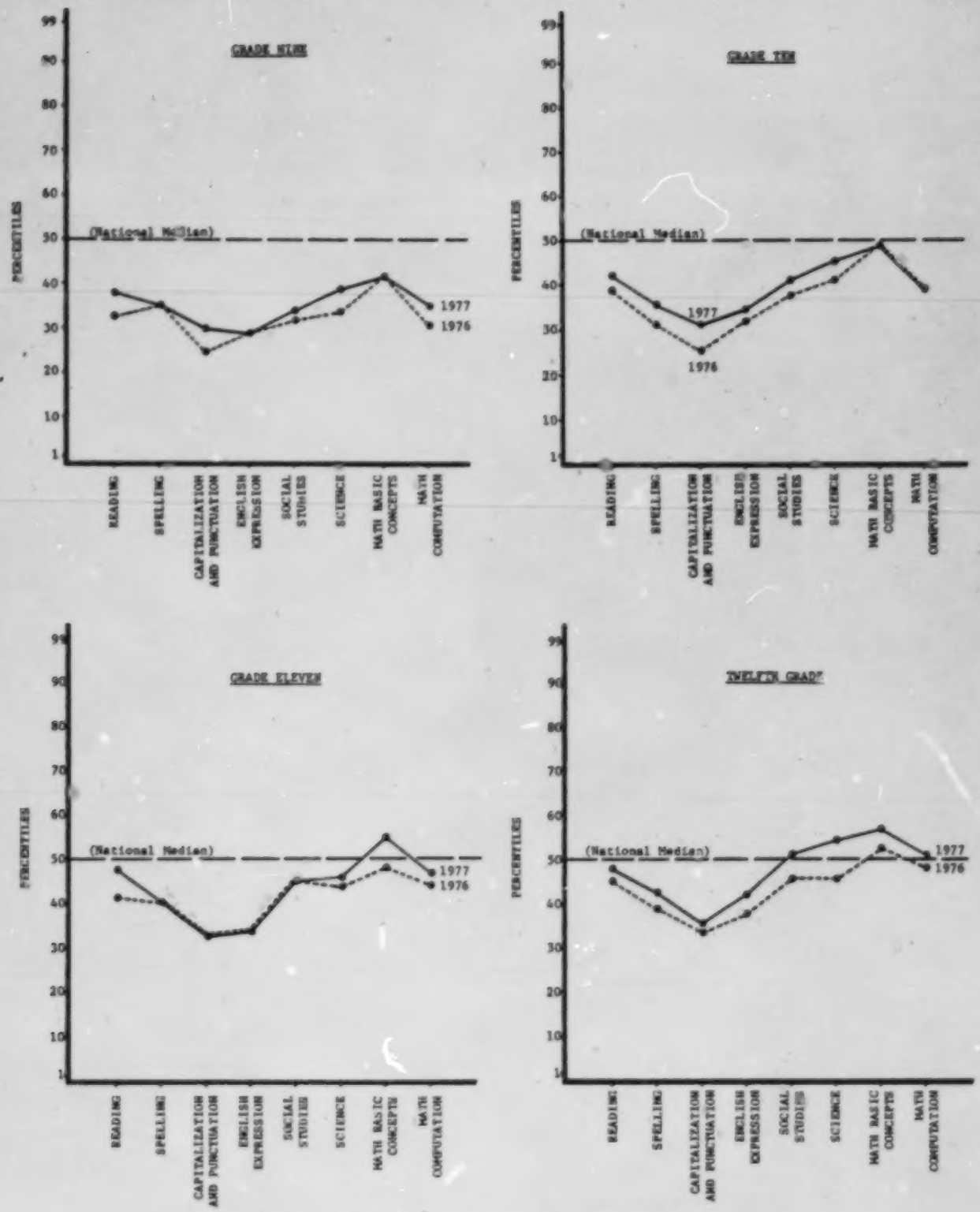
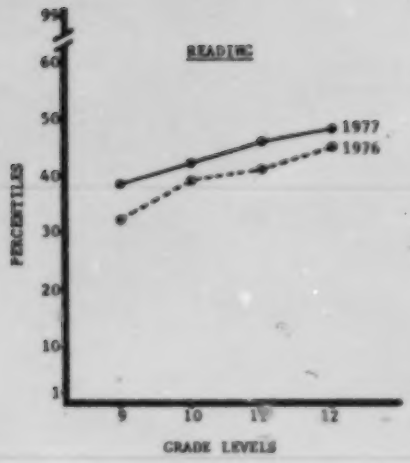
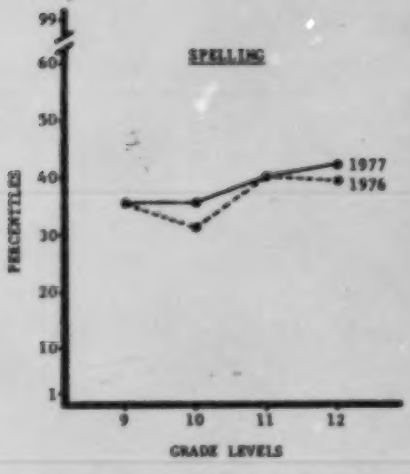
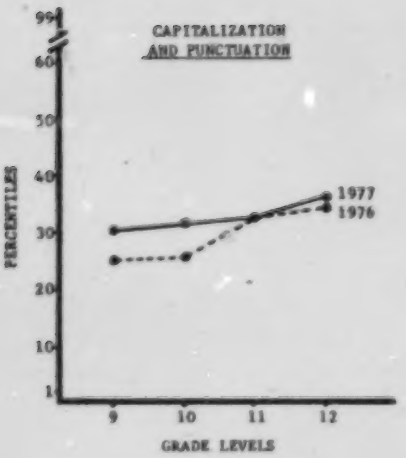


Figure IV-1: AISD MEDIANS ON THE SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS; 1976-77 SCHOOL YEAR COMPARED WITH THE PREVIOUS YEAR. Medians for all subtests of the S.T.E.P. for grades 9 to 12. These scores are for all students taking the test. This includes some students in special education classes.







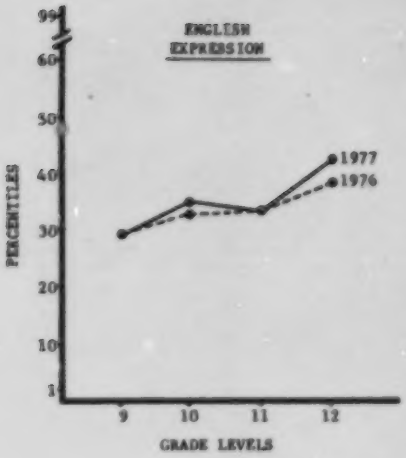
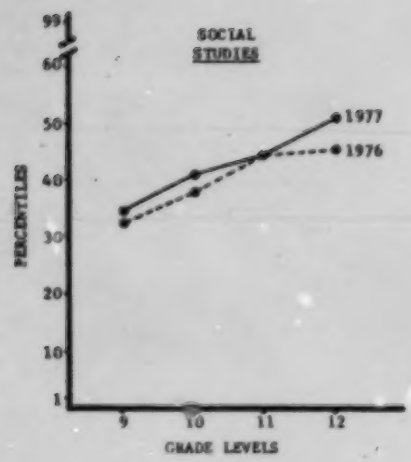
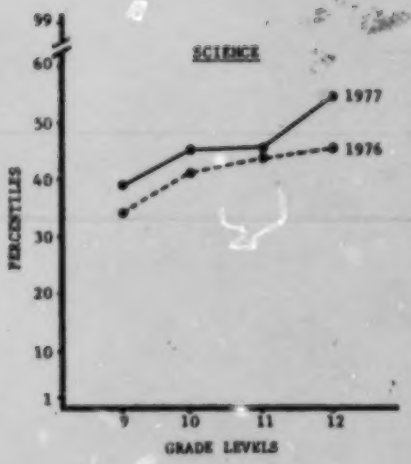
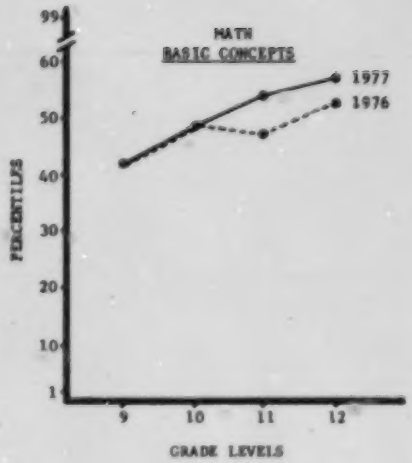


Figure IV-2: SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS, 1976-77 GRADE-BY-GRADE MEDIAN PERCENTILES COMPARED TO 1975-76. Data for all students tested, including some in special education.







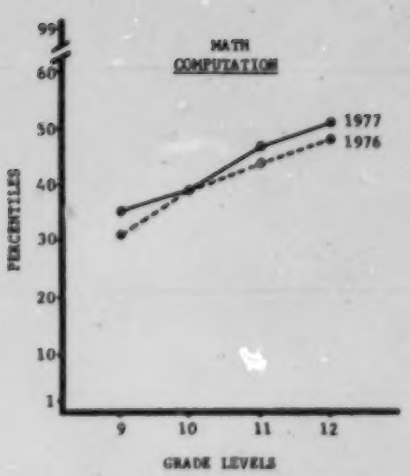


Figure IV-3: SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS, 1976-77 GRADE-BY-GRADE MEDIAN PERCENTILES COMPARED TO 1975-76. Data for all students tested, including some in special education.

GRADE	PERCENTILE POINT	READING		SPELLING		CAPITALIZATION & PUNCTUATION		ENGLISH EXPRESSION		SOCIAL STUDIES		SCIENCE		MATH BASIC CONCEPTS		MATH COMPUTATION	
		'76	'77	'76	'77	'76	'77	'76	'77	'76	'77	'76	'77	'76	'77	'76	'77
9	1st quartile	66	68	64	64	58	61	56	60	64	67	68	68	69	69	62	66
	Median	33	38	36	36	25	30	29	29	32	34	34	39	42	42	31	35
	3rd quartile	14	14	13	13	11	11	11	11	13	13	14	16	17	17	13	13
10	1st quartile	68	72	60	65	56	59	58	63	70	72	71	71	73	73	75	72
	Median	39	42	31	36	26	31	32	34	38	41	41	45	49	49	39	39
	3rd quartile	16	16	14	17	10	13	11	12	15	17	15	17	23	23	16	16
11	1st quartile	72	75	66	69	63	65	63	65	70	73	71	76	76	79	73	75
	Median	41	47	40	40	32	32	33	33	44	44	44	46	48	54	44	47
	3rd quartile	17	17	17	17	12	12	12	12	15	15	19	19	22	26	17	19
12	1st quartile	75	78	62	68	63	69	66	68	74	78	76	76	78	80	77	78
	Median	45	48	39	42	34	36	38	42	46	51	46	54	53	57	48	51
	3rd quartile	17	19	16	16	15	15	15	15	15	19	19	25	23	27	18	18

Figure IV-4 : SEQUENTIAL TESTS OF EDUCATION PROGRESS: PERCENTILES (DISTRICTWIDE). Summary of medians and first and third quartiles for all STEP subtests. Data were collected by ORE's Systemwide Evaluation component and include both regular and special education students. Approximate percentages of students tested for 1976&1977 respectively were 9th grade (88%, 87%), 10th grade (88%, 85%), 11th grade (86%, 81%), and 12th grade (81%, 66%). Rough ranges of the N's are: 9th grade (4200-4400), 10th grade (3800-3900), 11th grade (3200-3400) and 12th grade (1800-2500).

The Increases Differ in Magnitude for Different Grade Levels

We can table the median increase for separate grade levels (the median of the distribution of increases in median percentiles from 1975-76 to 1976-77 across all eight STEP subtests). The increase is greatest at grade 12, but this is not interpretable because of the change in percentage of test-takers. Grades 9 and 10 show a higher increase than grade 11.

GRADE	MEDIAN		1ST QUARTILE		3RD QUARTILE	
	MEDIAN GAIN	RANGE OF GAINS	MEDIAN GAIN	RANGE OF GAINS	MEDIAN GAIN	RANGE OF GAINS
9	3	0 to 5	2.5	0 to 4	0	0 to 2
10	3	0 to 5	2.5	-3 to 5	1.5	0 to 3
11	1	0 to 6	3	2 to 5	0	0 to 4
12	3.5	2 to 8	2.5	0 to 6	1	0 to 6

The Increases are Very Small for AISD's Lowest Quartile

While there is evidence of increase from 1975-76 to 1976-77, for the the total AISD population, there is little evidence of any increase for the lowest 25% of students. The 1976-77 3rd quartile points which cutoff this group are nearly the same as the 1975-76 3rd quartile points.

1976-77 Student Performance on the STEP: Pattern of Results

By subtests.* When looking at the difference between the AISD median and the national median by STEP subtest across all four grade levels, the pattern is striking. Mathematics Basic Concepts is the only subtest above the national norm. Reading, Social Studies, Science, and Math Computation are below the norm (4 to 7 percentile points). Spelling, Capitalization and Punctuation, and English Expression are further (10 to 12 percentile points) below the norm. These results are remarkably similar to the 1975-76 data. (NOTE: This is based on 1970 norms and the discussion in evaluation question 11 should be reviewed.)

By grade level. When looking at the median difference between the AISD median and the national median by grade level across all eight subtests, the pattern is again striking. There is an increase of about 5 percentile points between adjacent grades. Performance which was initially about 15 percentile points below the norm at grade 9, has increased to be at the norm by grade 12. These results are also remarkably similar to the 1975-76 data. (NOTE: This is based on 1970 norms and the discussion in evaluation question 11 should be reviewed.)

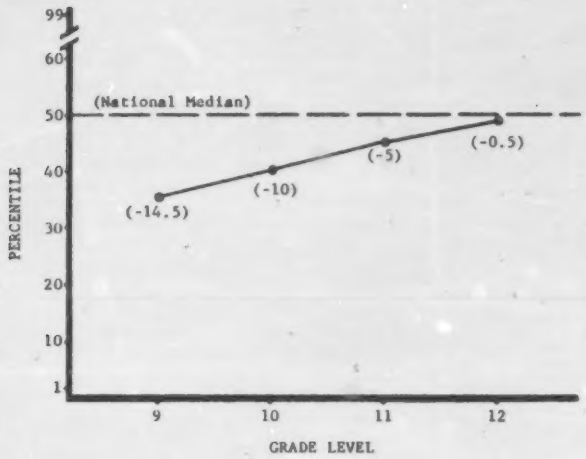


Figure IV-5: THE MEDIAN DIFFERENCE BETWEEN 1976-77 AISD MEDIAN STEP PERCENTILES AND THE NATIONAL NORM. These differences were calculated across all eight subtests for each grade level and are shown in parenthesis.

A Critical Comparison for the High School Curriculum Evaluation

Because of the change in percentage of test-takers at grade 12 and because required courses in areas related to the STEP subtests are completed in 11th grade, 1976-77 grade 12 data should not be compared with

* Data reported in the 1976-77 Systemwide Final Technical Report.

last year's data. Consider this table.

GRADE LEVEL	PERCENTAGE OF HIGH SCHOOL COURSE-WORK UNDER THE REVISED CURRICULUM	
	1975-76 STUDENTS	1976-77 STUDENTS
9	100%	100%
10	50%	100%
11	33%	67%
12	25%	50%

If the quarter system and revised curriculum per se were responsible for the observed increase in STEP scores, the increase should be greater for grade 10 than grade 9 (this is not the case) and as great for grade 11 as grade 10 in Social Studies and Language Arts* subtests (this is not the case). Therefore, other factors besides the revised curriculum are probably operating.

What May Some of These Other Factors Be

A thorough consideration of the causes of the observed increase has not been possible. Factors such as (1) the increased motivation caused by the new competency requirement policy, (2) the increased attention to instruction since the 1975-76 STEP results, (3) the practice students had with the STEP last year, (4) the teachers' knowledge of what the STEP tests, (5) lack of test security, and (6) teachers' response to Board priorities, and many others are all possible causes.

A Final Caution

The Sequential Tests of Educational Progress were taken by about 14,350 high school students this year. The STEP was completed by approximately 4300 9th-graders, 3900 10th-graders, 3300 11th-graders, and 1850 12th-graders. These students taking the test represent about 87%, 85%, 81%, and 66% of the enrollment of their respective classes. This is a drop at all grade levels from the 1975-76 percentage of test-takers. The drop in percentage is about 1.0% at 9th-grade, 2.5% at 10th-grade, 5.5% at 11th-grade, and 15.0% at 12th-grade. Because of this change, comparing this year's 12th-graders with last year may be invalid. Comparisions at the 11th grade level should also be cautiously interpretted. The reader should see the Systemwide Final Technical Report for a discussion on the bias that may be represented here.

* Required courses in Math and Science may have already been completed for a majority of students in grade 10.

2. Is there a relationship (separate for different ability groups) between gains in achievement from 1975-76 to 1976-77 and credits earned in Language Arts, Mathematics, Social Studies, and Science?

ANSWER: Yes. There is a relationship between credits earned and achievement in Mathematics and Science for all three ability groups. There is a relationship for Social Studies achievement in all but the low-ability group. However, there is no relationship for Language Arts in any ability group.

SUPPORTIVE DATA:

Using the 1975-76 STEP reading scores, high (1st quartile in the national norm group), average (2nd or 3rd quartile in the national norm group), and low (4th quartile in the national norm group) ability groups were formed. For each randomly selected 10th grade student the 1975-76 STEP scores, 1976-77 STEP scores, and the number of credits earned in Language Arts, Mathematics, Social Studies, and Science were obtained. A regression analysis was conducted to determine if the number of credits earned in a subject area was a significant predictor of learning. The results are presented in Figure IV-6 below.

GROUP/SUBTEST	NO EVIDENCE[a]	SOME EVIDENCE[b]	STRONG EVIDENCE[c]
LOW-ABILITY GROUP			
SPELLING	✓		
CAP. & PUNC.	✓		
ENG. EXP.	✓		
SOCIAL STUDIES	✓		
SCIENCE		✓	
MATH CONCEPTS		✓	
MATH COMP.			✓
AVERAGE-ABILITY GROUP			
SPELLING	✓		
CAP. & PUNC.	✓		
ENG. EXP.	✓		
SOCIAL STUDIES		✓	
SCIENCE			✓
MATH CONCEPTS			✓
MATH COMP.			✓
HIGH-ABILITY GROUP			
SPELLING	✓		
CAP. & PUNC.	✓		
ENG. EXP.	✓		
SOCIAL STUDIES		✓	
SCIENCE			✓
MATH CONCEPTS			✓
MATH COMP.			✓

a Probability of credits earned relating to achievement is less than .80.
b Probability of credits earned relating to achievement is between .80 and .95.
c Probability of credits earned relating to achievement is greater than .95.

Figure IV-6: EVIDENCE OF THE RELATIONSHIP BETWEEN CREDITS EARNED AND ACHIEVEMENT.

3. **Did the districtwide mean SAT scores in 1975-76* increase from previous years?**

ANSWER: No. Our districtwide mathematics scale mean remained at 507; the national sample remained at 472. On the verbal scale we dropped from 460 to 456, but the national sample dropped also, from 434 to 431.

Because our 1975-76 seniors would have taken less than 20% of their high school courses under the revised curriculum prior to the time they took the SAT, no statements can be made this year about any effects of the revised curriculum. We will need to examine the revised curriculum over the years.

SUPPORTIVE DATA:

Sample

Each of the last four years between 40 and 45 percent of our seniors have taken the SAT. The national sample, more than 1 million students, and our AISD sample (for 1975-76, N=1412) are comparable in the percentage of all minorities, percentage of male students, highest degree planned (BA, MA, or Ph.D.), and proposed fields of study. The AISD sample does, however, have fewer Black-American and more Mexican-American students than the national sample. Also our average student-reported parental income ($21,800 in 1975-76) is higher than the national sample by about $2000.

The students taking the SAT are a self-selected sample. This means AISD SAT-takers may differ on other relevant characteristics from the national sample of SAT-takers or from samples of SAT-takers in previous years. Still, the samples appear comparable.

Results

The available data are presented in Figure IV-7 on the next page. For the years data are available, AISD's average score on the SAT mathematics scale is about 31 points above and on the SAT verbal scale about 23 points above the national sample.

While AISD SAT-takers consistently score higher than the national sample on both the verbal and mathematics scale, some portion of this higher performance may be caused by AISD SAT-takers coming from more affluent families than the national sample of SAT-takers. However, our ACT data suggests differences of a couple of thousand dollars may not, in fact, be important.

The national and AISD scores are declining at about the same rates and both evidence a relatively faster decline in verbal than mathematical performance. For the AISD sample, the decline in mathematics has not been appreciable for the years for which we have data.

* 1976-77 data not available from the College Entrance Examination Board

AISD students perform better on mathematical than verbal skills. Their scores on the math scale are about 40-50 raw score points higher than their scores on the verbal scale. This difference is about 10 points greater (i.e. better math performance) than is found in the national sample. Also, on the College Entrance Examination Board's achievement tests (given the afternoon of the SAT) AISD students taking the Mathematics test over the years show a more consistent pattern of outperforming the national sample than AISD students taking the English Composition test.

Where Our SAT-takers Are Going:

To the extent sending SAT scores indexes eventual enrollment, reports of where our seniors send their scores gives us some idea of the type of institution they plan to attend. For 1975-76, 1,316 SAT-takers made a total of 3,936 initial requests for their scores to be sent to various schools.

The University of Texas at Austin is the primary institution SAT-takers request their scores be sent to. Southwest Texas State, Texas A & M, and Texas Tech University all draw more than 5% of the requests. However, about a dozen institutions draw 1% to 3% of the requests; and 26% of the requests are from schools drawing <.5% of the requests. An additional 4% of the requests go to scholarship committees.

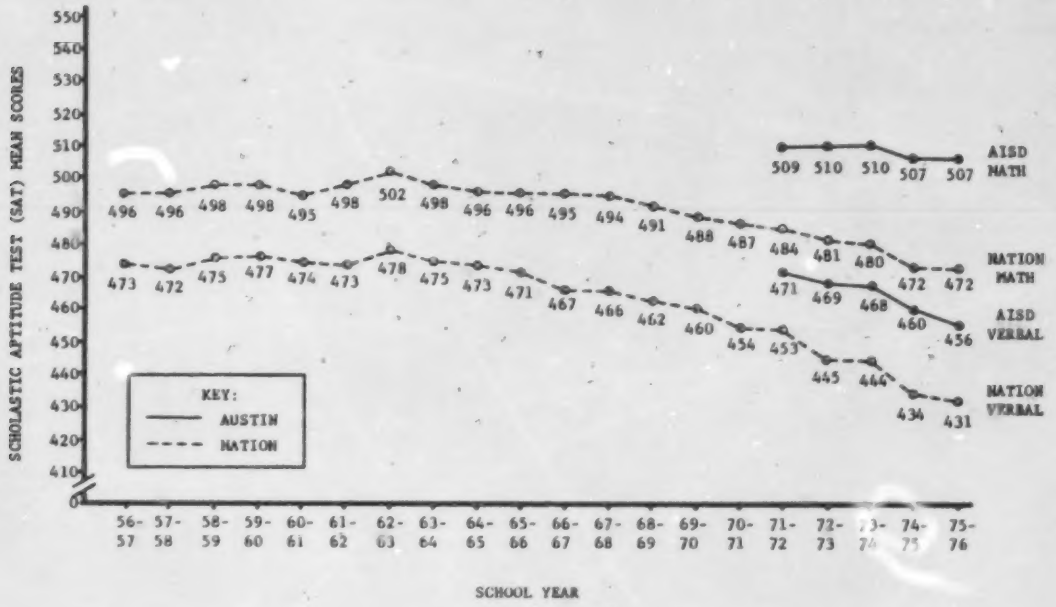


Figure IV-7: SCHOLASTIC APTITUDE TEST (SAT) LONGITUDINAL DATA. Mean SAT mathematics and verbal scores for AISD and the nation. (Note: Scores prior to 1971-72 are reported for all students who took the SAT during each school year, regardless of their grade. Scores beginning in 1971-72 are reported for all students who were seniors each school year, regardless of when they took the SAT). Data acquired from the College Entrance Examination Board. No AISD data is available prior to 1971-72.

4. Has the revised curriculum affected students' habits and attitudes toward study?

ANSWER: No. The percentage of student coursework which was taken under the quarter system is twice as great for our Spring, 1977 sample as our Spring, 1976 sample. Nonetheless, there is no difference in study habits and attitudes between the samples.

SUPPORTIVE DATA:

Why We Trust This Set of Data

The Survey of Study Habits and Attitudes (SSHA) (The Psychological Corporation, 1963) is a 100-item student self report of their judgments about a large set of school relevant behavior and attitudes. This year's data were collected in late March in 67 Social Studies classrooms chosen to be representative of the entire high school population. The final sample was large; 1372 high school students spent a full class period under careful supervision of ORE test administrators completing the SSHA. The administration was especially carefully conducted, because of the sensitivity of the instrument's content and the need to duplicate last year's procedures.

The Results on the SSHA Scales

Because we reviewed this instrument more stringently this year, we judged the norm group inappropriate. No percentile scores are reported. Also, because of both logical and technical problems with the instrument itself, the names and meaning of the specific SSHA scales will be omitted here. They can be found in Final Technical Report, Appendix P. Instead, the means on the four independent SSHA scales and three composite scales using a number for a symbol, are presented in the table below.

SAMPLE	INDEPENDENT SCALES[a]				COMPOSITE SCALES[b]		
DISTRICTWIDE	1	2	3	4	1+2	3+4	1+2+3+4
1977 (N=1372)	17.5	21.4	21.5	21.9	38.8	43.4	82.3
1976 (N=1044)	17.6	21.6	21.3	22.0	39.1	43.3	82.5
GRADE 12							
1977 (N=236)	17.4	23.2	24.0	23.2	40.6	47.3	87.8
1976 (N=206)	17.3	23.5	23.7	23.3	40.8	47.0	87.9
GRADE 11							
1977 (N=410)	16.9	21.2	21.1	21.2	38.0	42.3	80.4
1976 (N=210)	18.1	23.1	22.5	23.0	41.3	45.6	86.8
GRADE 10							
1977 (N=393)	17.4	20.8	21.1	21.7	38.2	42.8	81.0
1976 (N=204)	17.0	21.0	19.9	21.0	38.1	40.9	79.0
GRADE 9							
1977 (N=321)	18.5	21.0	20.7	22.1	39.6	42.8	82.4
1976 (N=312)	17.9	20.1	20.1	21.5	38.0	41.6	79.7

[a]Numbers 1 to 4 correspond respectively to the DA, WM, TA, and EA scales in the Technical Appendix.
[b]1+2 is the SH, 3+4 is the SA, and 1+2+3+4 is the SO scale in the Technical Appendix.

From the end of the first year of the quarter system to the end of the second year, there is no statistically significant change in the districtwide scale scores. The total score only, for the eleventh grade, does show significant change from the first to the second year, but no other changes are statistically significant. Therefore, in only one of the 28 cases (four grade levels times seven scales) is statistical significance found. In summary, there are no year-to-year changes in attitude and study habits. The reason this is important is that these comparisons are made between populations with very different exposure to the quarter system.

SAMPLE	PERCENTAGE OF ALL HIGH SCHOOL COURSE WORK UNDER QUARTER SYSTEM	TOTAL SCORE	STATISTICAL COMPARISON
Districtwide 1977 Districtwide 1976	about 2 • (XX) (XX)	82.3 vs. 82.5	SAME
Grade 12 1977 Grade 12 1976	50% 25%	87.8 vs. 87.9	[illegible]
Grade 11 1977 Grade 11 1976	67% 33%	80.4 vs. 86.8	WORSE
Grade 10 1977 Grade 10 1976	100% 50%	81.0 vs. 79.0	SAME
Grade 9 1977 Grade 9 1976	100% 100%	82.4 vs. 79.7	SAME

What Are Students Saying?

Because the norm sample is inappropriate, we decided we should provide descriptive information on the percentage of students answering important items. We selected items in the areas of Teachers & Instruction and Study & Influences on Study.

NOTE: The SSHA-H has 100 items. About 75% of these are negatively stated, that is, agreement with the statement is agreement with a negative evaluation of an area. For example, an item reads,"I think that teachers expect students to do too much studying outside of class." Here agreement means teachers are expecting too much homework. All but one of the 14 selected items are negatively stated. Therefore, if an "acquiescence set" exists among high school students, i.e. if high school students tend to agree with any statement, this would bias this data against schools and teachers.

Also, most of the item stems use "feel", "think", or "believe." When these words are used without modifers in the descriptive material below, they mean students "frequently", "generally", or "almost always" feel, think, or believe. That is, we have tabled the middle response opportunity, "frequently" to mean agreement with the item. While this is a good assumption, it does compound the problem of acquiescence set.

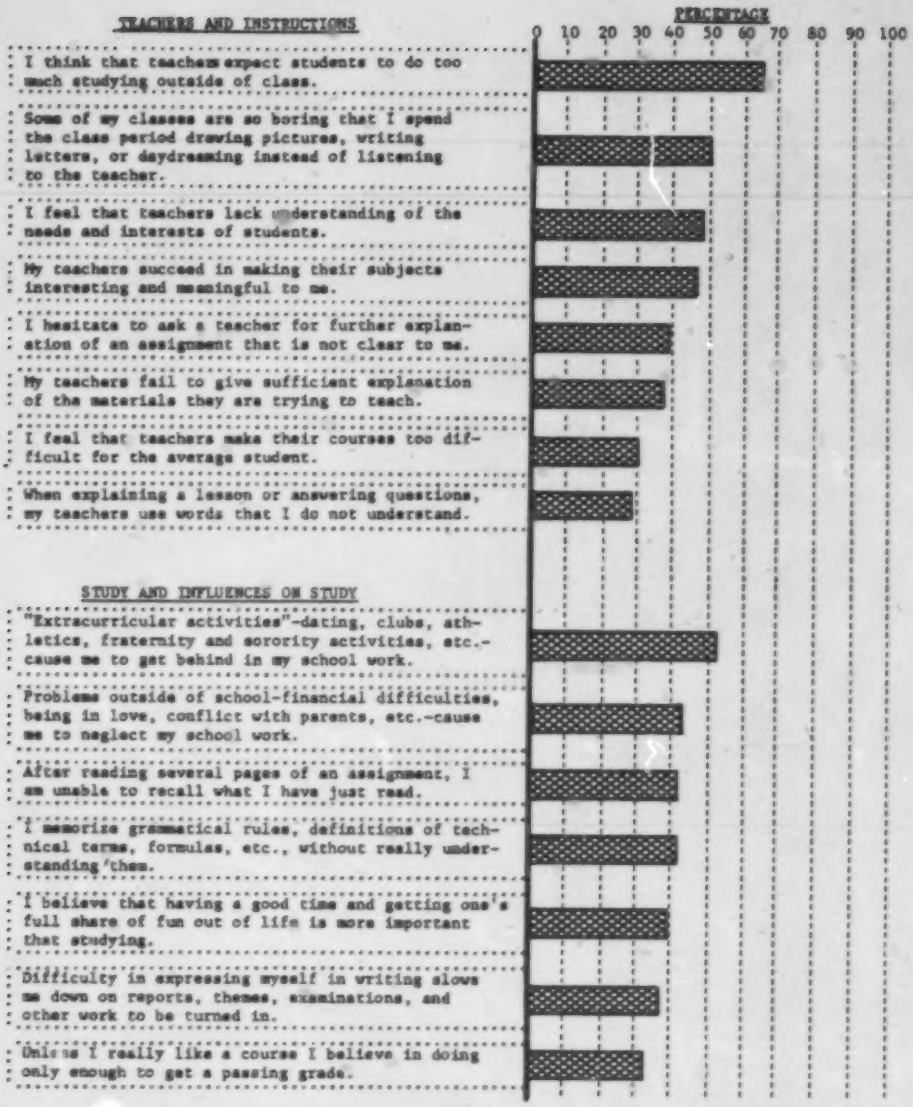

TEACHERS AND INSTRUCTIONS
PERCENTAGE
0 10 20 30 40 50 60 70 80 90 100
I think that teachers expect students to do too much studying outside of class.
Some of my classes are so boring that I spend the class period drawing pictures, writing letters, or daydreaming instead of listening to the teacher.
I feel that teachers lack understanding of the needs and interests of students.
My teachers succeed in making their subjects interesting and meaningful to me.
I hesitate to ask a teacher for further explanation of an assignment that is not clear to me.
My teachers fail to give sufficient explanation of the materials they are trying to teach.
I feel that teachers make their courses too difficult for the average student.
When explaining a lesson or answering questions, my teachers use words that I do not understand.
STUDY AND INFLUENCES ON STUDY
"Extracurricular activities"-dating, clubs, athletics, fraternity and sorority activities, etc.-cause me to get behind in my school work.
Problems outside of school-financial difficulties, being in love, conflict with parents, etc.-cause me to neglect my school work.
After reading several pages of an assignment, I am unable to recall what I have just read.
I memorize grammatical rules, definitions of technical terms, formulas, etc., without really understanding them.
I believe that having a good time and getting one's full share of fun out of life is more important that studying.
Difficulty in expressing myself in writing slows me down on reports, themes, examinations, and other work to be turned in.
Unless I really like a course I believe in doing only enough to get a passing grade.

Figure IV- 8 : WHAT STUDENTS SAY ABOUT SCHOOL AND STUDY. The percentage of the district-wide 1976-77 sample (N=1372) indicating they "frequently", "generally", or "almost always" agree with selected SSHA statements."

Teachers and Instruction

About 65% of the students in the sample think that teachers expect students to do too much studying outside of class. About half the students think that some classes are so boring they don't listen to the teachers, and that teachers lack understanding of students' needs and problems, but about half of the students believe teachers succeed in making their subjects interesting and meaningful.

About 40% believe that teachers fail to give sufficient explanation of what they are trying to teach and that they themselves hesitate to ask for further explanation of unclear assignments. However, only about 30% of the students feel that teachers make courses too difficult for the average students or use words students don't understand in explanations.

Study and Influences on Study

About half the students think that extracurricular activities cause them to get behind in school work. Also, 40% feel problems outside of school cause them to neglect school work, and that having a good time is more important than studying.

About 40% of the students believe that after reading an assignment they are unable to remember what they read, that they memorize rules and definitions without really understanding them, or that they are slowed down in their work by difficulty with expressing themselves in writing. About one-third believe in doing only enough to get a passing grade.

5. Has the districtwide mean high school percentage of attendance increased in 1976-77 from previous years?

ANSWER: No.

SUPPORTIVE DATA:

Figure IV-9 presents the percentage of attendance for the entire year for Austin ISD high schools. Data are reported from 1950-51 to the present. For the two years under the Quarter System, percentage of attendance has increased by approximately 0.3% per year.

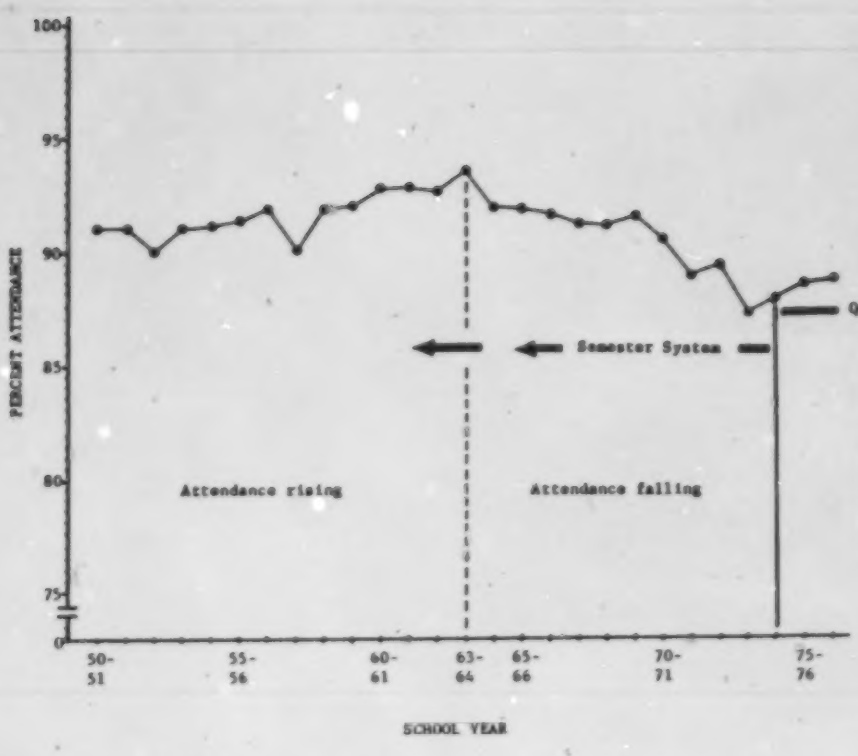
However, (1) in 1974-75, the year prior to the Quarter System, percentage of attendance had increased 0.7%, (2) the percentage of attendance had been dropping since 1963-64 until 1973-74, at 0.6% annually, and (3) the average absolute change in attendance for the 24 yearly periods since 1950-51 prior to the Quarter System is 0.7%.

What seems to underlie this data is slight yearly increases from the early 1950's to about 1963-64. Then a more rapid decrease set in until 1973-74. This looks like a trend reflecting changes in the society as a whole.

Average Daily Membership

The percentage attendance figures have been calculated on an increasing membership. The High School Average Daily Membership has increased from 1970-71 through 1976-77 at the same rate as the population of Austin: as the population of Austin:

DATE	AUSTIN POPULATION	AISD H.S. ADM	PERCENTAGE
April, 1970	253,539	14,460	5.71%
April, 1976	308,087	17,002	5.51%



DATA BY END OF SCHOOL YEAR

YR.	%ATT	YR.	%ATT	YR.	%ATT
'51	91.0	'60	92.0	'69	91.2
'52	91.0	'61	92.7	'70	91.6
'53	90.1	'62	92.8	'71	90.7
'54	91.0	'63	92.7	'72	89.0
'55	91.2	'64	93.5	'73	89.4
'56	91.4	'65	92.0	'74	87.4
'57	91.8	'66	91.9	'75	88.1
'58	90.1	'67	91.7	'76	88.6
'59	91.9	'68	91.3	'77	88.7

Figure IV-9: LONGITUDINAL TREND IN PERCENT ATTENDANCE FOR AISD HIGH SCHOOL MEMBERSHIP FROM 1950-51 THROUGH 1976-77. High school membership is defined as the sum of 9th through 12th graders. Data supplied by the Office of Child Accounting.

6. Have the school leaver or graduation rates changed from previous years?

ANSWER: No.

SUPPORTIVE DATA:

Total School Leavers

The graph in Figure IV-10 shows school leavers (ages 14 through 21) as a percentage of the high school ADM, from 1968-69 through 1975-76. A regression analysis performed on this data supports the visual impression: there is no linear change in the percentage of school leavers.

In 1975-76, the first year of the quarter system, there was an increase of 0.45% in the percentage of school leavers. However, it was (1) the same as the increase the last year of the semester system, and (2) less than the average absolute change (0.95%) over the seven year period. Therefore, the observed change cannot be attributed to the quarter system and revised curriculum during its first year in operation.

School Leavers By Ethnic Group

Figure IV-11 shows the school leavers by ethnic group for the four years for which data are available. There were extreme changes in 1973-74 from 1972-73, for the Black and Anglo school leavers, and an extreme change in 1974-75 for the Mexican-American leavers. However, we can only report these changes, because data for years prior to 1972-73, the 1976-77 data, and obviously future years' data are not available. No statements can be made.

Graduation Rates

Figure IV-12 presents the graduation rate since 1964-65. Graduation rate is defined here as the ratio of graduating seniors in any given year to the total 9th through 12th grade ADM. The average absolute change in graduation rate for the 11 years prior to the institution of the quarter system was 0.96%. The graduation rate for the first year of the quarter system increased 1.03% over the previous year, and for the second year increased 0.86% over the first year.

These increases are both close to the average yearly absolute change. Increases of this magnitude have occured several times in the 12 year period. Continued monitoring of the graduation rate would be necessary before it would be possible to attribute any of the increase to the quarter system and revised curriculum.

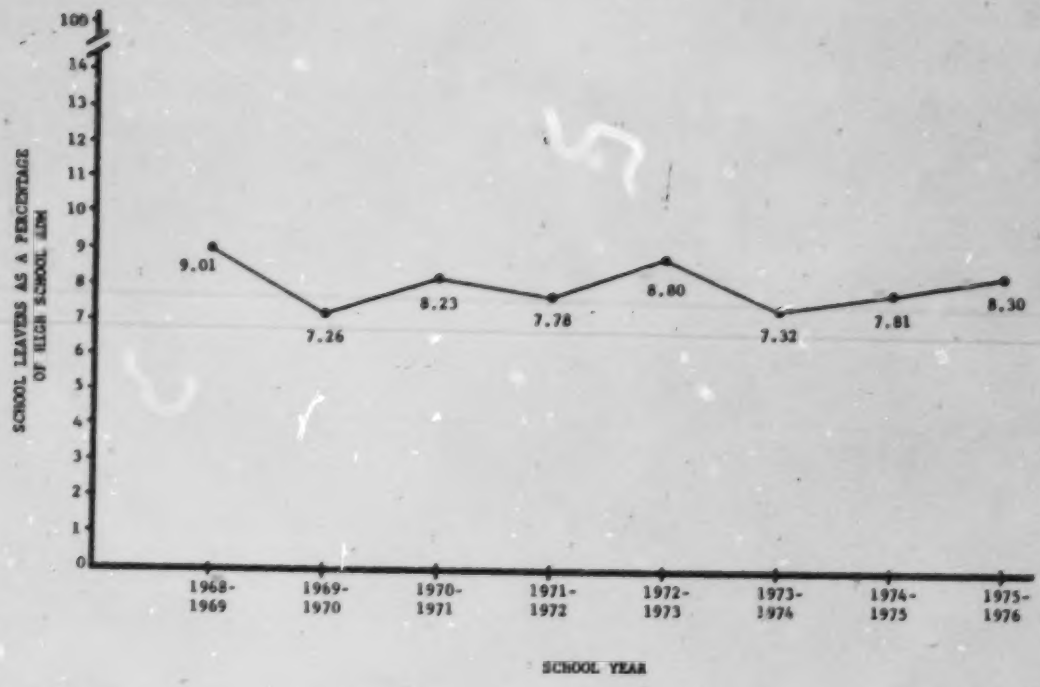


Figure IV-10: SCHOOL LEAVERS AS A PERCENTAGE OF HIGH SCHOOL AIM OVER A PERIOD OF EIGHT YEARS. Data supplied by AISD's Office of Child Accounting.

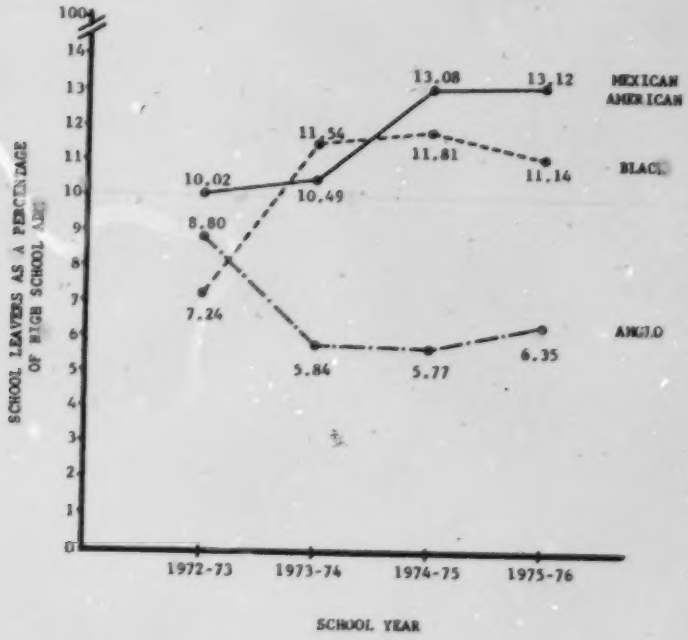
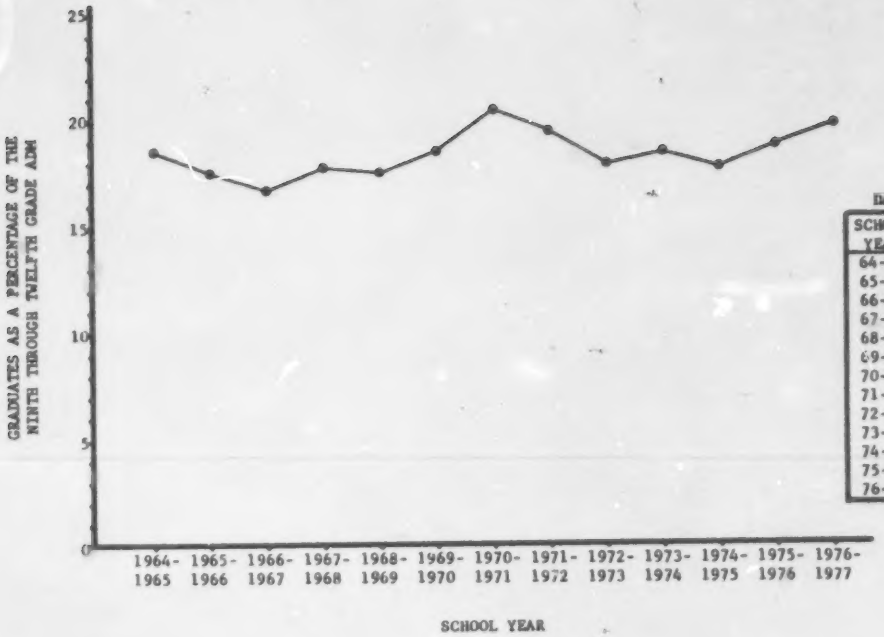


Figure IV-11: SCHOOL LEAVERS AS A PERCENTAGE OF HIGH SCHOOL AIM OF THE VARIOUS ETHNIC GROUPS. Data supplied by the Office of Child Accounting. Ethnic breakdowns on school leavers were not available prior to 1972-73.



DATA SUMMARY:

SCHOOL YEAR	GRADUATES N	GRADUATES %
64-65	2177	18.64
65-66	2101	17.55
66-67	2107	16.79
67-68	2414	17.80
68-69	2521	17.64
69-70	2699	18.67
70-71	3090	20.47
71-72	2974	19.48
72-73	2821	18.02
73-74	3028	18.58
74-75	2963	17.96
75-76	3229	18.99
76-77	3416	19.85

Figure IV-12: AISD GRADUATES AS A PERCENTAGE OF THE NINTH THROUGH TWELFTH GRADE ADM FOR EACH YEAR FROM 1964-65 THROUGH 1976-77. The data supplied by the Office of Child Accounting.

7. What are the distributions of grades for each course and curriculum area?

ANSWER: The distribution of grades for each first and second quarter course are provided in our Final Technical Report, Appendix D, "Earned Grade Distributions."

The distribution of grades for each curriculum area is presented in Figure IV-13 below.

CURRICULUM AREA	Quarter Credits Required	First Q. Total Enrollments	Second Q. Total Enrollments	Both Q's Total Enrollment	SUMMARY DISTRIBUTION % A	% B	% C	% D	% F
REQUIRED AREAS	(36)								
Eng./Lang.Arts	9	17,302	16,989	34,291	23	32	26	4	14
Soc. Studies	9	15,628	15,329	30,957	23	28	27	5	17
Mathematics	6	14,033	13,232	27,265	19	23	30	3	20
Science	6	11,792	11,363	23,155	23	28	25	5	17
Phy. Educ.	5	7,960	7,665	15,625	44	29	15	5	10
Health	2	2,731	3,156	5,887	28	29	24	6	12
ELECTIVE AREAS	(27)								
Bus. Educ.	0	4,333	3,812	8,145	35	33	22	1	8
Foreign. La.	0	4,260	3,816	8,076	45	32	18	0	4
Homemaking	0	2,055	2,116	4,171	35	34	14	3	8
Art	0	1,587	1,548	3,135	35	38	18	2	6
Instr. Music	0	1,755	1,682	3,437	57	20	10	1	3
Choir/Gen.Music	0	952	926	1,878	61	28	8	1	2
Varsity Sports	0	3,100	2,631	5,731	91	7	1	0	1
Indus. Arts	0	4,262	4,174	8,436	21	32	28	3	16
Voc. & Coop. Ed.	0	1,884	1,775	3,659	35	40	16	2	6
Trades /Indus.Ed.	0	505	466	971	28	37	26	2	6
Agriculture	0	207	202	409	21	44	25	1	5
A F Jr. ROTC	0	121	112	233	13	21	44	12	11
Driver's Educ.*	0	1,107	1,137	2,244	9	13	9	0	4
Aerospace	0	59	72	131	18	35	29	5	12
Study Hall/etc.	0	2,953	2,954	5,907	32	30	22	7	11
Spec. Educ.	0	1,124	1,065	2,189	25	34	24	4	12
GRAND TOTAL	63	99,710	96,222	195,932					

* Large proportion of incompletes

Figure IV-13: SUMMARY DISTRIBUTION OF EARNED GRADES. Data based on first two quarters.

SUPPORTIVE DATA:

Introduction

Data on students' earned grades is based on 99,457 grades awarded first quarter and 96,009 grades awarded second quarter. These are all the grades granted to high school students in AISD.

Grades reflect more than content coverage. In fact, on this year's Teacher Questionnaire about one-quarter of our teachers agree that grades may not index content mastery. Today we are assailed with national reports of increasing high school and college GPA and declining

performance by the same students on more objective standardized tests. While this trend has been reported nationally, here in AISD longitudinal data on grades is not available. This data set represents the first comprehensive look at high school grading.

There are several factors which should be considered in drawing conclusions from the obtained grade distributions. Furthermore, the judgments one makes on these obtained distributions will necessarily be based on one's values and the nature of grading:

1. About 25% of AISD high school teachers believe grades do not measure content mastery.

2. The number of F's includes a significant proportion of "F's for non-attendance" as distinct from academic failure.

3. Grades probably reflect teachers' reactions to student and parent expectations and demands, as well as student content mastery.

4. For elective areas low grades discourage students from taking courses; this would lower enrollments and decrease the number of teacher units.

Results: Required Curriculum Areas

1. For the four required academic areas (Language Arts, Social Studies, Mathematics, and Science) the distribution of grades earned by students is:

   A's: 22% B's: 29% C's: 27% D's: 4% F's: 17%

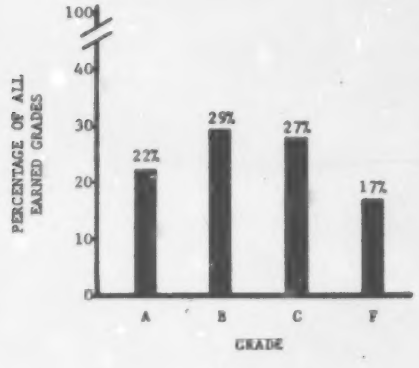


Figure IV-14: THE DISTRIBUTION OF EARNED GRADES FOR THE FOUR REQUIRED ACADEMIC AREAS. Based on all 115,668 grades earned in these areas during the Fall and Winter quarter of 1976-77.

Therefore, the percentage of A's and B's is 51%, the failure rate is 17% and D's are not used frequently (D's indicate attendance and effort, but not necessarily mastery). Furthermore, the grade distributions are remarkably constant across these four areas; Mathematics tending to have the "toughest" grading and Language Arts the "easiest."

2. The grade distributions for Health courses approximate those of the four academic areas; there are about 5% more A's and 5% less F's.

3. The grade distributions for Physical Education courses differ markedly from the other required areas; A's and B's in Physical Education account for 73% of the grades.

Results: Elective Curriculum Areas

1. The only major elective area with a grade distribution comparable to that in the required areas is Industrial Arts. Two-thirds of the elective areas grant fully 10% more A's and B's than the required academic areas. One-third grant 20% more A's and B's.

2. Among the elective areas, Varsity Sports, Music, and Foreign Language have the greatest proportion of A's and B's granted; all have more than 75% A's and B's. The vocational areas tend to have the least proportion of A's and B's among elective areas--between 53% and 75%.

8. What "costs" has the quarter system created for those responsible for implementation?

ANSWER: Many. In a number of important areas, the quarter system is "costing" the district. The quarter system requires more outside time on the part of teachers than the semester system. It creates problems for teachers, chiefly doing too much paperwork and having several ability levels in the same classrooms. The quarter system interferes even more with counselors's ability to serve students. Scheduling and paperwork are the greatest problems for counselors. The major problem for the non-teaching staff is having too much to do with too little time (and other resources) to do it. Both principals and coordinators see scheduling as the major problem.

SUPPORTIVE DATA:

Teachers' Problems

Seven hundred and sixty high school teachers responded to a list of problems they might have experienced with the quarter system and expanded curriculum. Each potential problem appearing in the Teacher Questionnaire was rated as "no problem at all", "minor problem", "moderate problem", or "severe problem." The percentage of teachers giving the moderate and severe designations was added to index problem severity. The results are tabled below.

POSSIBLE PROBLEM	PERCENTAGE INDEX OF PROBLEM SEVERITY
Doing too much paperwork	63
Several ability levels in the same class	58
Organizing and obtaining new materials	49
Putting in time planning new courses	48
Teaching too many different courses	37
Getting to know 3...groups of students	36
Additional testing and grading	35
Class time lost for instruction...	27
Increased difficulty in...discipline	22

"Doing too much paperwork" was most frequently nominated by the teachers as their most serious problem, and "having several ability levels in the same class as the second most serious problem. These same two problems were nominated as either first or second most serious by teachers at all high schools, except one. These same two problems were also most frequently nominated as most severe by teachers in the various curriculum areas. Only one curriculum area nominated neither.

Of the teachers who taught in AISD under the semester system (N=667), 35% report that the quarter system requires "much more time" outside of class. Another 46% report it requires "some more time" and only 1% report it takes "less time."

Counselors' Problems

According to counselors, the quarter system is interfering with their ability to serve students. When counselors (N=48) were given a list of problems which may be associated with the quarter system and expanded curriculum, nearly every problem described was rated a "major" or "serious" problem by half or more of the counselors. In the table below the problem areas rated by counselors are listed according to the index of severity.

POSSIBLE PROBLEM	PERCENTAGE INDEX OF PROBLEM SEVERITY
More paperwork associated with three quarters	83
Many students needing to change courses	79
Not enough time for personal counseling	77
Scheduling	75
Insufficient time	72
Many students needing help with personal problems	61
Not enough time for academic counseling	57
Having to work faster to get it all done	57
More counselor responsibilities	51
Not enough time for career counseling	49
Having to stay later at school to get it all done	48
Too many courses to be knowledgeable about	42

In another question about problems, twenty-nine counselors nominated "scheduling/registration" as the biggest problem the quarter system gives them in terms of interfering with their ability to offer services to students. "Paperwork" (N=8) and "insufficient time" (N=6) are the second and third most frequently cited problems.

Non-teaching High School Personnel Problems

When non-teaching personnel were given a list of problems which may be associated with the quarter system and expanded curriculum, every problem presented was rated as "major" or "serious" by at least 40% of non-teaching personnel. The following table lists the problem areas in order of percen age of personnel rating the area as a "major" or "serious" problem.

POSSIBLE PROBLEM	PERCENTAGE INDEX OF PROBLEM SEVERITY
Having to do everything 3 times a year	59
More problems with students changing courses	59
Doing too much paperwork	51
Having to work faster to get it all done	46
Greater difficulty in scheduling teachers & students...	41
Having more duties	41
Having to work longer hours or...at home...	40

All of the problem areas were rated as "major" or "serious" by a larger percentage of the non-professional non-teaching personnel (registrars, secretaries, clerks, and aides) than the professional (assistant principals, deans, and librarians).

The problem area most often nominated (N=38) by non-teaching personnel as the greatest problem they face in adequately carrying out their roles, was having too much to do and too little time to do it. The second most frequently nominated problem (N=23) is lack of adequate personnel, materials, and facilities.

Problems Reported by High School Principals and Secondary Instructional Coordinators

When principals and coordinators were asked to rank a list of problems that may be associated with the quarter system and expanded curriculum, the three problems that were ranked as most severe by principals were (1)"scheduling a large number of courses three times a year", (2) "teachers getting acquainted with three groups of students per year", and (3) "a shortage of texts and supplementary materials." One principal did say that not one of the listed problems was a real problem. The three problems judged to be most severe by the coordinators were (1) "scheduling a large number of courses three times a year", (2) "more paperwork involved with three quarters", and (3) "many students needing course changes."

9. What are the distributions of student enrollment (by sex and ethnicity) for each quarter course and course area?

ANSWER: The actual districtwide enrollments for the fall, winter, and spring quarter are available in our Final Technical Report (Appendices D and E). Figure IV-15 below gives the enrollment for each curriculum area.

CURRICULUM AREA	REQUIRED QUARTER CREDITS	TOTAL ENROLLMENT	PERCENTAGE OF EACH ETHNIC GROUP			PERCENTAGE MALE
			A/O	B	HA	
REQUIRED AREAS	(36)					
English/Lang. Arts	9	50,974	67	14	18	50
Social Studies	8	44,565	67	14	9	51
Mathematics	6	40,232	68	13	18	52
Science	6	34,298	69	12	18	15
Physical Education	5	22,954	64	15	22	53
Health	2	8,189	66	14	20	50
Required Areas Total		201,232				
ELECTIVES	(27)					
Business Education	0	11,864	67	13	19	25
Foreign Language	0	11,635	79	5	15	45
Homemaking	0	6,281	56	26	18	23
Art	0	4,741	62	17	21	49
Instrum. Music	0	5,066	75	9	16	48
Choral/Gen. Music	0	2,764	77	10	13	37
Varsity Sports	0	8,248	67	19	15	52*
Industrial Arts	0	12,878	62	16	21	78
Voc. & Coop. Ed.	0	5,338	66	14	21	40
Trades & Ind. Ed.	0	1,409	42	17	40	81
Agriculture	0	599	98	2	1	62
A.F. Jr. ROTC	0	325	69	18	13	75
Driver's Education	0	3,519	73	11	17	48
Aerospace	0	174	87	3	11	90
Study Hall/etc.	0	12,682	73	10	17	48
Special Education	0	3,180	38*	40*	22*	72*
Elective Areas Total	0	90,703				
GRAND TOTAL	(63)	291,935				

*Based on Q1 and Q2 data only.

Figure IV-15: SUMMARY OF COURSE ENROLLMENTS AND SEX AND ETHNIC DISTRIBUTIONS.

SUPPORTIVE DATA:

Data for this question were obtained by a program which accessed Data Services' "Grade Master Tape File" (GMTF). The program was run for each quarter of 1976-77. This is a nearly ideal data source, because it contains a record for each course each AISD high school student is enrolled in (about 100,000 records per quarter). Ethnicity was obtained by a program which matched the GMTF with another tape file.

Required Areas

From the data from these files, we found that enrollment in the four required academic areas and Physical Education is almost constant from quarter to quarter within each grade, but decreases from ninth through twelfth grade. In each area, enrollment decreases sharply after the required number of quarters would have been completed by most students. Most students seem to take the two required Health quarter courses in eleventh grade.

Elective Areas

Concurrent with the decrease in enrollment in required academic areas from ninth through twelfth grades, enrollment in elective courses increases. The elective areas with the highest total enrollment are Industrial Arts, Business Education, Foreign Language, and Study Hall/ Misc.. The elective areas with very low enrollments are Agriculture, A.F. Jr. ROTC, and Aerospace.

While some elective areas are relatively stable in enrollment from grade to grade, others show marked increases or decreases. For example, enrollment in Foreign Language courses shows a marked decrease in twelfth grade while Instrumental Music declines from ninth to twelfth grade.

Enrollment by Sex

As presented in the table above, in all required areas the enrollment by sex closely approximates the district, which is 51% male. The only area in which there is quarter-to-quarter change is Varsity Sports, where there is more male participation 3rd quarter. In Industrial Arts, Trades/Industrial Education, ROTC, and Aerospace enrollment is over three-fourths male. Business Education and Homemaking enrollments are less than one-quarter male, while Foreign Languages, Choral/General Music, and Vocational/Coop. Education enrollments are about 40% male. Enrollment by sex showed very little change this year from the 1975-76 data.

Enrollment by Ethnicity

Across the district at the high school level the ethnic breakdown is 14.4% Black-American, 19.3% Mexican-American, and 66.3% Anglo-American and other. In all required areas and half of the elective areas, course enrollments by ethnic group are very close to the district as

a whole. Furthermore, in all areas there is little quarter-to-quarter change.

Foreign Languages, Instrumental Music, Choral/General Music, and Aerospace have substantially higher Anglo/other enrollment than the district. Agriculture has almost no minority students enrolled. The enrollment of Black students in Homemaking is above the district, and the number of Mexican-American students enrolled in Trades/Industrial Education is double the percentage for the district.

Special Education courses have an enrollment of about 70% male, and 38% Anglo, 40% Black, and 22% Mexican-American. These ethnicity figures are based on quarters 1 and 2, because quarter 3 data is very different and may be suspect.

Ethnicity remained stable in almost all curriculum areas from 1975-76 to 1976-77.

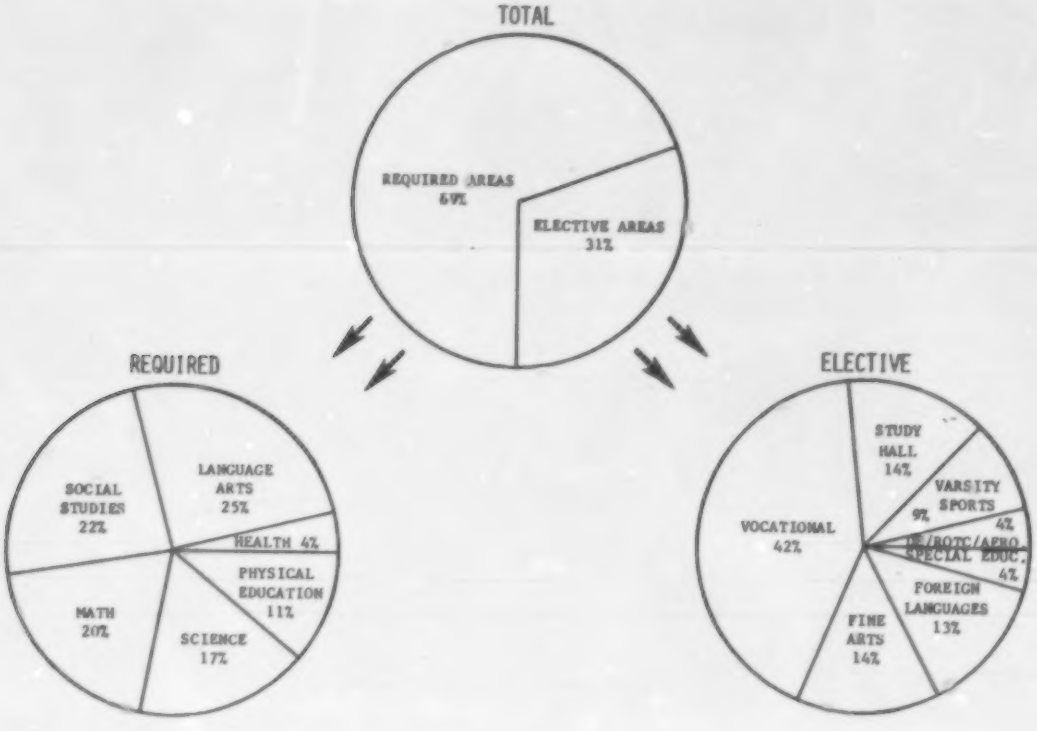


Figure IV-16: PERCENTAGE OF ENROLLMENTS ACCOUNTED FOR BY THE VARIOUS CURRICULUM AREAS.

10. What courses are students (college bound and non-college bound) taking and exiting AISD with; in particular how are the 27 quarter course electives being used?

ANSWER: The table below shows the quarter course credits earned by college bound and non-college bound students.

CURRICULUM AREA	COLLEGE BOUND N=92	NON-COLLEGE BOUND N=70
Language Arts	11.1	9.5
Mathematics	8.2	6.5
Social Studies	10.5	9.8
Science	7.0	5.0
Business Education	2.7	2.9
Foreign Language	3.5	1.4
Industrial Arts	1.9	2.4
Homemaking	0.8	1.7
Voc. Ed./Coop Education	2.2	4.9
Trade & Indus. Education	0.3	1.1
Agriculture	0.0	0.1
Art; Instrumental, Choral, & General Music	3.4	3.1
Physical Education & Varsity Sports	7.0	6.0
Health	1.9	1.9
Other (ROTC, Driver's Ed. Aerospace, Study Hall...)	0.8	0.9
REQUIRED AREAS	45.7	38.7
ELECTIVE AREAS	15.6	18.5
ALL AREAS	61.3	57.2

By the end of the second quarter of their senior year, students have taken and earned an average of about 60 credits of the 63 required. About 34 of these credits are in required academic areas, five more credits than required. Students have also completed the required courses in Physical Education and Health.

There is no single area which dominates the elective courses taken. For the average student, about five elective credits have been earned in the required academic areas, and about 19 in the elective areas. They have earned an average of 3.4 credits in Fine Arts, 3.3 in Vocational/Coop. Education, 2.7 in Business Education, 2.6 in Foreign Languages, 2.1 in Industrial Arts, and 1.2 in Homemaking. The students have about three more elective credits to earn during the last quarter of their senior year.

College bound students have earned about four more quarter credits than non-college bound. They have earned eight more credits in academic areas, and non-college bound students have earned five more credits in vocational areas.

SUPPORTIVE DATA:

We conducted an Earned Credit Survey in which the records of a random sample of 181 AISD seniors were analyzed to determine how many credits they had earned in each curriculum area. We were able to get complete data for 171 students, through the second quarter of their senior year. The students' goals (four-year college bound or non-college bound) were obtained from the senior counselor at each high school.

Credits Earned in Required Areas

By the end of the second quarter of their senior year, AISD students have earned an average of 59.9 credits of the 63 required for graduation. About 34.4 of these credits are in the required academic areas, where 29 credits are required. This indicates that about 5.4 elective credits have been earned in the required academic areas.

For Health (2 quarter courses required) no elective credits have been earned. For Physical Education (5 quarter courses required) we estimate, based on this earned credit survey and our work on course enrollments, that 5 quarter credits have been earned. However, because Physical Education requirements may be waived for certain substitutions (e.g. band, varsity sports) we cannot determine how many elective Physical Education courses are taken.

Credits Earned in Elective Areas

About 18.7 credits have been earned of the 27 required in the elective areas. The 5.4 elective credits from the required academic areas give a total of about 24 elective credits. That leaves the three courses spring quarter seniors are enrolled in (Appendix E), presumably elective courses.

About six times as many electives come from the elective areas as from the required core curriculum. Within the required academic areas Mathematics and Language Arts are most frequently chosen electives.

College-Bound/Non-College Bound

There are marked differences between credits earned by college bound and non-college bound students. By the end of the second quarter of their senior year, the college bound students have earned 61.3 credits, while the non-college bound have earned only 57.2. The college bound students have earned from 1 to 2 more credits in each of the four required academic areas, Foreign Language, and Physical Education/Varsity Sports. Non-college bound students have earned .5 credits more in

Industrial Arts, .9 more in Homemaking, 2.7 more in Vocational Education/Coop. Education, and .8 more in Trade & Industrial Education. The college bound students have earned 7.8 credits over the requirement in the required academic areas, but the non-college bound have earned only 1.8 over the requirement in those areas.

1. How do our eleventh graders score, compared to a national sample of seniors, on the separate STEP subtests?

ANSWER: Given 1970 national norms, the AISD eleventh grade median score is below the national median on all tests except Mathematics Basic Concepts. It is below the norm (3 to 6 percentile points) for Reading, Social Studies, Science, and Mathematics Computation. It is farther below the norm (10 to 18 percentile points) for Mechanics of Writing (Spelling and Capitalization and Punctuation) and English Expression.

Achievement is very similar among the separate skill areas comprising a given content area. AISD has about the national average percentage of "academically able" (top 11%) and much more than the average percentage of "academically disabled" (bottom 11%). School differences exist and reflect student characteristics. Black and Mexican-American achievement is 25 to 30 percentile points below Anglo achievement.

SUPPORTIVE DATA:

Why We Focused on the Eleventh Grade

Eleventh grade was selected as the year to index the effects of AISD's High School curriculum because:

(1) At the time of the eleventh grade STEP testing, nearly all the required courses would have been already completed or nearing completion.

(2) Many twelfth graders would not be present for STEP testing either because of completing the graduation requirements earlier in the year or being absent. More than one-third, in fact, would be missing.

(3) The twelfth grade is a "selected sample", which may not represent the district as a whole, since only students with the possibility to graduate that year are promoted to become seniors.

Therefore, in our judgment, eleventh grade is the year students "exit" the curriculum for evaluation purposes.

Why We Are Uncomfortable with the National Norm

There are many standards against which to measure the performance of a group of students. One standard is a comparison of that group with another, theoretically national, sample. The STEP national norm group is, in the professional judgment of ORE, as good, if not better, than other obtainable standardization samples. However, it does suffer from two serious shortcomings.

First, the norms are 1970 norms. We have no good way of comparing our AISD eleventh grade spring, 1977 results to a spring, 1977 national norm. We do know in the case of the SAT national sample (not truly a norm group) between 1970 and 1976 the avarage verbal scale score has dropped

29 points (.29 standard deviations) and the math score about 15 points (.15 standard deviations). Therefore, it is not unreasonable to expect at least a somewhat similar magnitude drop on the STEP. Looking at just two scales, reading and math computation, it appears as if a 1977 norm group would have very different percentiles.

STEP SUBTEST	11th GRADE MEDIAN		SD	CORRECTION FACTOR	CORRECTION	THEORETICAL PERCENTILE
	PERCENTILE	CONVERTED SCORE				
READING	50 %-tile	465	15	-.29	-4.35	39%-tile
MATH COMPUTATION	50 %-tile	467	19	-.16	-3.04	44%-tile

This must alert us to the dangers of jumping to conclusions about the absolute level of performance of our 11th graders ("exiting group") or even the relative differences between their mathematics and verbal performance. It may be that in the last 7 years the entire national norm group has in fact changed, i.e. "our ruler may be made of rubber." Figure IV-17 points out the effect this could have on our data, were it true.

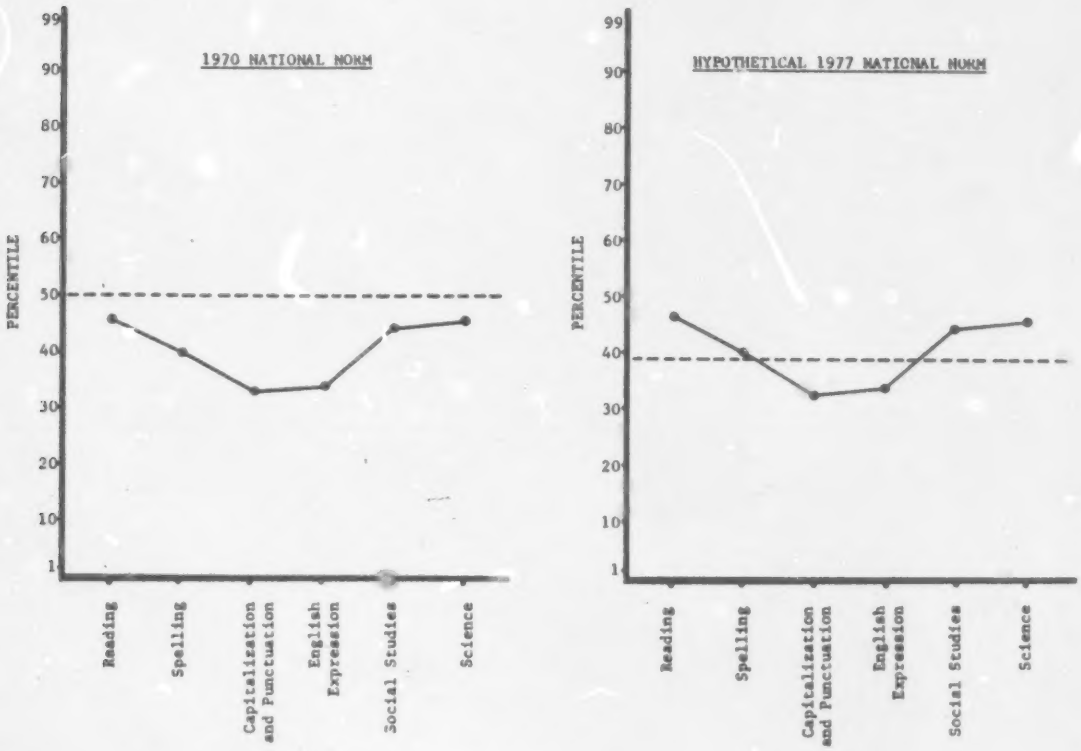


Figure IV-17: THE PSYCHOLOGICAL EFFECT OF THE NORM. A graphic display of AISD Spring, 1977 STEP data compared with two different National norms.

Second, even if the possible change discussed previously is not occuring, still is any national norm group an appropriate comparison? Does AISD have students of the same types (motivational, cultural, aptitudinal, economic...) in the same proportion to the national group? This is highly unlikely. What is an appropriate comparison sample? Is there any? And if there were, in the words of a Board member, "Is the national norm a sufficiently 'high standard' for a district like AISD?"

Achievement on the Various STEP Subtests

Placing aside the possibly severe limitations of a 1970 norm group and the logical problems of comparing groups of students not equated for the large number of relevant characteristics affecting achievement, what are the results?

Figure IV-18 presents the eleventh grade spring 1977 STEP medians and 1st and 3rd quartile points for all eight subtests.

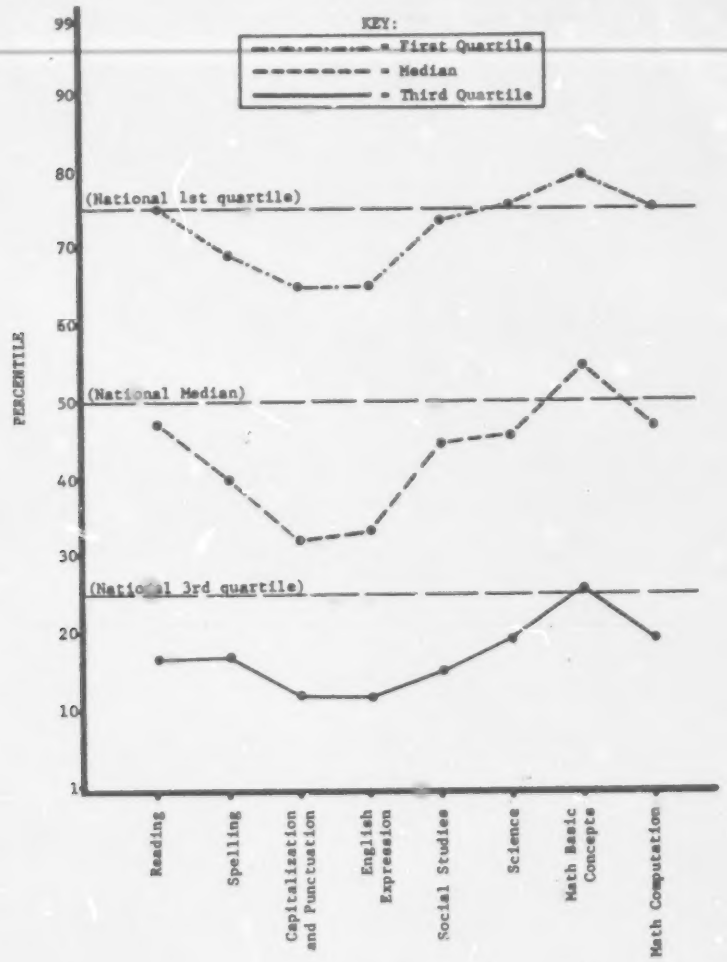


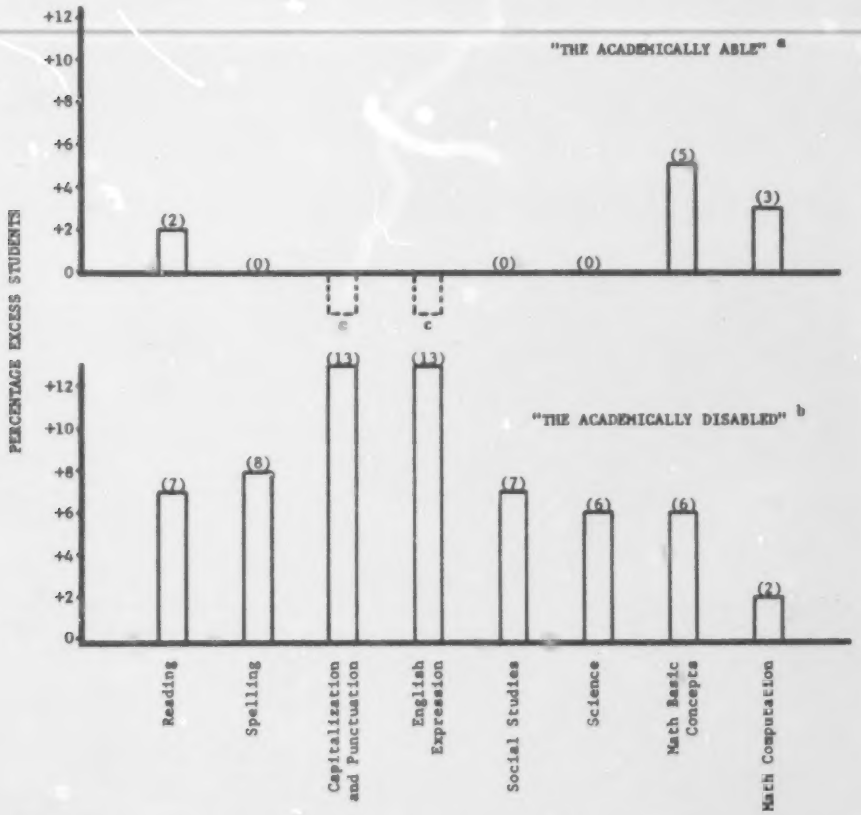
Figure IV-18: ELEVENTH GRADE SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS: DISTRICTWIDE MEDIAN, 1st QUARTILE AND 3rd QUARTILE. These compared with the nation for the Spring, 1977 STEP results.

The Mathematics Basic Concepts subtest is the only subtest where the AISD median and 1st and 3rd quartile points are higher (1 to 4 percentile points) than the corresponding national norm percentiles.

The AISD 1st quartile points for Mathematics Computation, Science, Social Studies, and Reading subtests are at or near the national 1st quartile. The medians are somewhat below (3 to 6 percentile points) the national medians, and the 3rd quartiles are even more below (6 to 10 percentile points) the national 3rd quartiles.

For both Mechanics of Writing subtests (Spelling; Capitalization and Punctuation) and English Expression all three AISD statistics are much lower (10 to 18 percentile points) than the national percentiles.

Figure IV-19 presents the percentage of AISD eleventh-graders in the top two and the bottom two stanines in excess of the expected 11% in each. For the "academically able" group, AISD has almost exactly the same percentages of students as in the norm group. For the "academically disabled" group AISD has, on the average, about 8% more students. That is, AISD has an excess of lower achieving students.



[a] Defined as scoring in the 8th and 9th national norm stanines, which contain approximately 11% of the scores.

[b] Defined as scoring in the 1st and 2nd national norm stanines, which contain approximately 11% of the scores.

[c] Actually 2% below the national sample.

Figure IV-19: THE PERCENTAGES OF AISD ELEVENTH GRADERS IN THE TOP TWO AND IN THE BOTTOM TWO STANINES IN EXCESS OF THE NATIONAL GROUP. Spring, 1977 STEP data are from the Systemwide Evaluation component of O.R.E.

By Skill and Subskill Area. The items of each STEP subtest can be grouped by the skills which students must possess to answer the item correctly. When we examine the pattern of performance on specific skills, little difference among the specific skills is evident. Specific subgroups of students and different individuals may have more differentiated patterns of ability than evident in the table below.

STEP SUBTEST	SKILL AREAS	SUBSKILL AREA	# of items	AVE. % correct NATL.	AISD	% DIFFERENCE
READING	Vocabulary		30	75	71	-4%
	Comprehension		30	55	52	-3%
		main ideas	4	53	54	+1%
		details	5	65	60	-5%
		character analysis	4	48	46	-2%
		conclusions/inferences tone and mood	16	54	52	-2%
MECHANICS OF WRITING: SPELLING	Spelling		45	60	56	-4%
MECHANICS OF WRITCAT./PUNCT.	Punctuation		32	57	50	-7%
	Capitalization		15	69	62	-7%
ENGLISH EXPRESSION	Usage		37	61	54	-7%
		agreement/case	11	53	51	-2%
		comparison	5	61	61	0%
		general usage	14	57	51	-6%
		verb forms	7	58	59	+1%
	Sentence Structure		12	55	52	-3%
		modifer placement	3	43	45	+2%
		clauses/phrases	7	54	51	-3%
		parallelism	2	69	66	-3%
SOCIAL STUDIES	Organizing Information		6	65	59	-6%
	Interpreting Information		28	58	56	-2%
	Evaluation		36	54	52	-2%
SCIENCE	Knowledge		12	54	50	-4%
	Comprehension		15	53	54	+1%
	Application		40	55	56	+1%
	Higher Level		8	62	61	-1%
MATH BASIC CONCEPTS	Recall facts/ Manipulation		17	45	47	+2%
	Comprehension		23	57	61	+4%
	Higher Level		10	38	41	+3%
MATH COMPUTATION	Whole Numbers		7	80	81	+1%
	Fractions		14	64	58	-6%
	Decimals/Percents		22	55	51	-4%
	Denominate Numbers		6	55	52	-3%
	Algebraic Manipulation		11	54	56	+2%

What About Specific Subgroups

By high schools. The unit of analysis for this evaluation study has been the districtwide curriculum. Systemwide Evaluation provides individual school results. Still, examine the following table:

SCHOOL	PERCENTAGE BLACK + MEXICAN-AMERICANS ('77)	'77 STEP READING MEDIAN	% "ABLE"	% "DISABLED"
Anderson	12	68	25	6
Crockett	18	54	12	8
McCallum	22	47	9	16
Lanier	22	47	11	15
LBJ	37	41	10	19
Reagan	38	39	11	21
Austin	39	61	22	15
Travis	58	29	6	22
Johnston	98	12	0	45

There are large differences in school-by-school achievement levels. These differences are systematic; they relate to student characteristics. Knowing the percentage of minority students allows one to predict achievement, roughly. These predictions fall down in only one case, Austin High School, where a disproportionate number of "able" students raises the school's median.

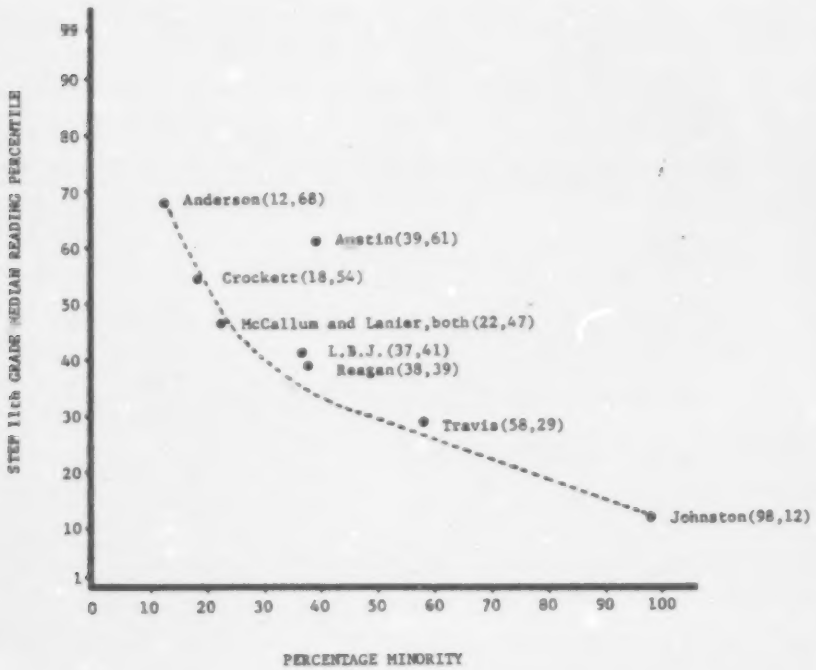


Figure IV-20: AISD ELEVENTH GRADE STEP READING MEDIAN PERCENTILE COMPARED WITH PERCENTAGE MINORITY AT EACH HIGH SCHOOL. Minority figures are from the October 1, 1976 report from Child Accounting. The STEP figures are for Spring, 1977 data from the Systemwide Evaluation component of O.R.E.

Ethnic Differences.

Based on the medians of the Spring, 1976 STEP achievement scores, Black and Mexican-American students consistently score low at 11th grade on all the STEP subtests. They score lower than the national norms and the Anglo students. Anglo students score at about the norm. The data for Black students are somewhat lower than the Mexican American data. Figure IV-21 shows these differences.

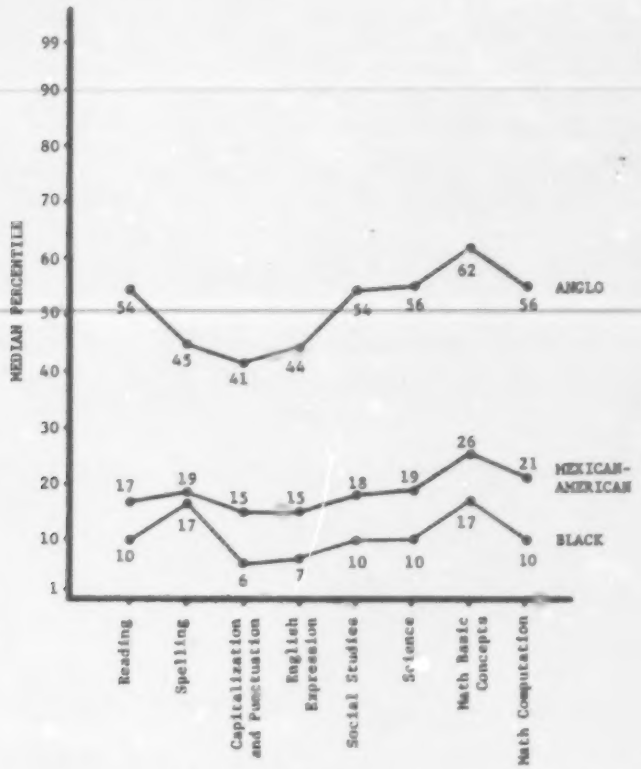


Figure IV-21: ETHNIC DIFFERENCES ON THE STEP SUBTESTS FOR ELEVENTH GRADE. 1975-76 data from the Systemwide Evaluation component of O.R.E..

12. What actions have been planned by the high schools to implement the minimum competency requirements in mathematics and reading?

ANSWER: Little direct action had been taken by the high schools at the time of the interviews, though the Board adopted the policy on November 26, 1976, and the interviews expected to answer the question were conducted mid-February to mid-March. The only "action" initiated by more than one-third of the high schools was making students aware of the competency requirement. The judgment of the interviewer was that until the policy called for immediate action (in conjunction with testing later in the spring) little significant action would be taken.

SUPPORTIVE DATA:

The principals were asked when they were interviewed, "What are some of the steps you have taken or plan to take to administer this policy?" One principal commented that policy implementation "is still a year away." Other principals mentioned the steps listed below:

STEPS TAKEN OR PLANNED BY PRINCIPALS	FREQUENCY
Make students more aware of competency requirements	4
Detect learning problems earlier	3
Consider special classes or tutoring	2
Identify 10th graders not meeting the requirements	1
Plan additional testing to identify problems	1
Review student records to identify problems	1

Nineteen coordinators were asked when they were interviewed, "Are there any implications in this policy for your curriculum area?" Five coordinators responded that there were no implications, and the others listed the following:

IMPLICATIONS FOR CURRICULUM AREAS	FREQUENCY
Improvement in all areas of learning, if competency level rises	6
Some elective areas may lose enrollment to remedial courses	5
Number of dropouts likely to increase	2
Interpretation of policy will determine results	2
May make serious students more serious	1

13. What is the number and percentage of Black, Mexican-American, and Anglo students due to graduate in Spring, 1979, who would be required to take more than 9 quarters of Language Arts and Reading to remedy reading deficiencies or have their parents or guardians file a letter acknowledging that the student proposes to graduate without achieving an 8th grade level in reading (as estimated from previous achievement scores)?

ANSWER:

	BLACK	MEXICAN-AMERICAN	ANGLO/OTHER	TOTAL
Number[a]	374	407	239	1020
Percentage of Group	59%	46%	8%	23%

[a]These data assume a 10% drop in ADM from 8th to 11th grade for all ethnic groups and no use of the CAT reading test as an alternative to the STEP.

A large number of high school students will not meet the newly adopted 8th grade reading competency requirement. The students affected will include a disproportionate number of minority students.

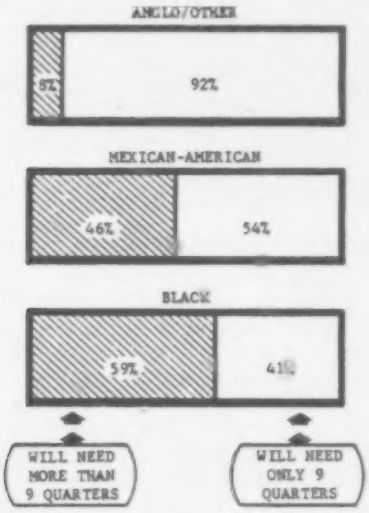


Figure IV-22: ESTIMATES OF THE PERCENTAGE OF STUDENTS IN EACH ETHNIC GROUP WHO WILL BE REQUIRED TO TAKE MORE THAN NINE QUARTERS OF LANGUAGE ARTS AND READING.

SUPPORTIVE DATA:

See Figure IV-23.

art buchwald

Some can't even spell 'kat'

WASHINGTON — The Board of Education of the State of Virginia has issued an edict that in order for a student to receive a high school diploma he will have to be able to prove he can read, write and perform basic arithmetic computations.

If other states follow suit, this radical step could eventually affect every high school student in the country. Although the Virginia board won't put the rule into effect until 1978, many students are already claiming that the decision violates the Constitution as cruel and unusual punishment.

"Like," a Virginia high school student told me, "I think that's an awful lot to expect of someone going to school. I mean they're asking us to prove we can read and write and also figure out decimals. How do they expect any of us to finish high school if they're going to make it that tough?"

Source: 8/19/77
Austin-American Statesman

		MATHEMATICS COMPETENCY				READING COMPETENCY			
		BLACK	M-A	ANGLO/ OTHER	TOTAL	BLACK	M-A	ANGLO/ OTHER	TOTAL
1974-1975 8th GRADERS	MEMBERSHIP[1]	705	975	3153	4833	705	975	3153	4833
	PERCENT TESTED[2]	78.8	82.6	94.6	---	80	83.7	95.8	---
	PERCENT PASSING[3]	9.3	18.9	60.6	---	12.9	19	65	---
	NUMBER PASSING[4]	52	152	1808	2012	73	155	1963	2191
	NUMBER NOT PASSING[5]	653	823	1345	2821	632	820	1190	2642
1975-1976 9th GRADERS	ADDITIONAL PASSERS[6]	15	27	208	250	67	90	382	539
	NUMBER STILL NOT PASSING[7]	638	796	1137	2571	565	730	808	2103
1976-1977 10th GRADERS	ADDITIONAL PASSERS[8]	105	131	407	643	101	138	337	576
	NUMBER STILL NOT PASSING[9]	533	665	730	1928	464	592	471	1527
		465[a]	561[a]	175[a]	1201[a]				
1977-1978 11th GRADERS	ADDITIONAL PASSERS[10]					49	140	205	394
	NUMBER STILL NOT PASSING[11]					415	452	266	1133
						374[b]	407[b]	239[b]	1020[b]

[a]Includes a 6% drop in ADM from 8th to 10th grade for all ethnic groups and 611 additional CAT passers.

[b]Includes a 10% drop in ADM from 8th to 11th grade for all ethnic groups and no CAT reading test as an alternative to the STEP.

[1]1974-75 membership estimates calculated by taking the Total Membership for the Entire Year report and applying the October 1, 1974 ethnicity figures.

[2+3]Based on 1975-76 actual CAT data.

[4](1) x (2) x (3)

[5](1) - (4)

[6]An estimate based on 1974-75 8th graders who were <u>below</u> 8th grade cutoff on the CAT and go on to score <u>above</u> 8th grade cutoff on the STEP in 1975-76. Actual data were available for the total population. Also includes a small number of persons never taking the CAT, but passing the STEP.

[7](5) - (6)

[8+10]An estimate of the additional number of people passing the requirement on the STEP testing at the end of the year. Based on 1975-76 STEP data percentage drops between adjacent grade levels applied to 1974-75 membership.

[9+11]"Numbers still not passing" from previous year minus "additional passers".

Figure IV-23: ESTIMATES OF NUMBERS OF STUDENTS NOT PASSING THE COMPETENCY REQUIREMENTS.

14. What is the number and percentage of Black, Mexican-American, and Anglo students due to graduate in Spring, 1979, who would be required to take more than 6 quarters of Mathematics to remedy mathematics deficiencies or have their parents or guardians file a letter acknowledging that the student proposes to graduate without achieving an 8th grade level in mathematics (as estimated from previous achievement scores)?

ANSWER:

	BLACK	MEXICAN-AMERICAN	ANGLO/OTHER	TOTAL
Number [a]	465	561	175	1201
Percentage Of Group	70%	61%	6%	26%

[a]These data assume a 6% drop in ADM from 8th to 10th grade for all ethnic groups and 611 additional CAT Form B passers (actual 1976-77 data) distributed ethnically in proportion to data on those passing as of the end of grade 10.

A large number of high school students will not meet the newly adopted 8th grade mathematics competency requirement. The students affected will include a disproportionate number of minority students.

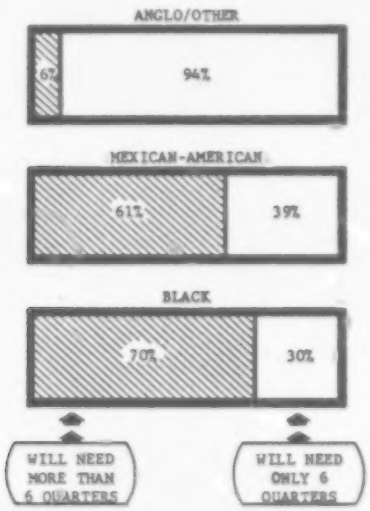


Figure IV-24: ESTIMATES OF THE PERCENTAGE OF STUDENTS IN EACH ETHNIC GROUP WHO WILL BE REQUIRED TO TAKE MORE THAN SIX QUARTERS OF MATHEMATICS.

SUPPORTIVE DATA:

See Figure IV-23.

Diploma testing urged

HOUSTON (AP) — A legislative study subcommittee recommended Thursday that Texas youths not be granted public high school diplomas until they can prove competency in reading, writing and arithmetic.

The Texas House Education subcommittee on educational goals said in its report that legislation will be introduced next year to require statewide testing by 1978 in grades six through 12. The testing would include all grades by 1984.

After statewide hearings, the subcommittee members said Texas public schools have failed to develop specific goals for pupils in terms of reading, writing and mathematics.

Pupils who fail to pass the proposed tests would be required to repeat the basic courses until they receive an acceptable grade.

Source: 8/19/77
Austin-American Statesman

15. What are understood to be the major duties and responsibilities of counselors?

ANSWER: The major duties and responsibilities reported by counselors are:

1. Curriculum Related Counseling (17 hours/week)
2. Personal Adjustment Counseling (10 hours/week)
3. Counsulting (6 hours/week)
4. Other duties, including record-keeping (11 hours/week)

Both principals and secondary coordinators would change the high school counseling program by taking steps to increase counselor availability.

Principals would increase counselors' time spent on "interpreting test scores and helping students assess their abilities", "communicating with parents", and "training teachers for academic and vocational advising." Coordinators would increase counselors' time spent on advising students "about course selection" and "about post-graduation plans."

SUPPORTIVE DATA:

Counselor Estimates of Time Spent on Each Duty

Although counselors are aware of the formal descriptions of counselor duties, they report their allocation of time among major duties and responsibilities is primarily a result of local campus needs.

Counselors estimate they spend about three-quarters of their time on counseling or consulting. Their primary duty, Curriculum Related Counseling, accounts for about 40% of their time. However, they do estimate nearly 25% of their time is spent on Personal Adjustment Counseling. Much less time is spent in a Consulting role. The major "other duty" counselors perform is record-keeping, estimated to take five to six hours per week. The table in Figure IV-25 below shows the estimates by counselors of time spent on major duties.

Principal and Coordinator Priorities For Counselors

Nine high school principals and 18 secondary instructional coordinators were interviewed. One question asked them whether, according to their understanding of the counselor's role, counselors should spend more, less, or about the same amount of time on various duties.

The major counselor duties are listed below in order of priority. The priority order is the number of principals or coordinators saying "more time is needed" minus the number saying "less time." This is reported in the "Net Increase Time" column below. The number saying "about the same" and the valid N are also shown.

PRINCIPALS			COORDINATORS		
Increase Time	No Change	Item	Increase Time	No Change	Item
+6	3	Interpreting test scores & helping students assess their abilities (N=9)	+12	2	Advising students about course selection (N=18)
+6	3	Communicating with parents (N=9)	+12	4	Advising students about thier post-graduation plans (N=18)
+5	2	Training teachers for academic & vocational advising (N=7)	+8	4	Interpreting test scores & helping students assess their abilities (N=14)
+4	5	Counseling students about their personal problems (N=9)	+7	6	Communicating with parents (N=15)
+4	3	Advising students about their post-graduation plans (N=9)	+5	5	Helping students with scheduling problems (N=18)
+3	5	Consulting to improve interpersonal relationships in the school (student/student, student/staff, staff/staff) (N=8)	0	5	Consulting to improve interpersonal relationships in the school (student/student, student/staff, staff/staff) (N=17)
			-1	7	Consulting students about their personal problems (N=16)
+2	7	Coordinating the school testing program (N=9)	-1	2	Training teachers for academic & vocational advising (N=17)
+1	6	Advising students about course selection (N=9)	-4	6	Coordinating the school testing program (N=16)
0	5	Helping students with scheduling problems (N=9)			

Over half the principals felt that more time should be spent on "interpreting test scores and helping students assess their abilities", "communicating with parents", and "training teachers for academic and vocational advising."

About two-thirds of the coordinators thought that more time should be spent on advising students "about course selection" and "about post-graduation plans."

Principals and coordinators were also asked if there were major changes they would like to see in the counseling program. Their suggestions were:

CHANGES SUGGESTED			
BY PRINCIPALS	FREQUENCY	BY COORDINATORS	FREQUENCY
Increase counselor availability (decrease work load and clerical work)	5	More counselors and counseling available	9
Deephasize personal counseling	3	More objective and relevant course advising	4
Increase counselor professionalism*	3	Closer teacher/counselor relations	2
Increase vocational counseling	2	More emphasis on counseling junior high school students	2
Counselors should feel that scheduling is part of their function	2	Improved personal counseling	1
		Counseling on staff/staff relations	1
		More communication (verbal) with parents	1

*Three principals indicated concerns without suggesting changes: (1) There may be some less than competent counselors, (2) Some counselors may be unwilling to work, and (3) Some may expect principals to handle student-teacher relations.

The most frequently nominated change from both principals and coordinators was to increase counselor availability.

AREA OF COUNSELOR RESPONSIBILITY	ESTIMATED HOURS SPENT
CURRICULUM RELATED COUNSELING	
Providing information about h.s. graduation and college entrance requirements	4.4
Counseling individual students on post-graduation plans	3.5
Informing students about h.s. vocational training opportunities	3.2
Assisting students on preparing 4-year course plans	3.1
Helping students interpret test scores and assess their own abilities	2.6
TOTAL	16.8
PERSONAL ADJUSTMENT COUNSELING	
Counseling students about their current personal problems	5.2
Counseling students on adjusting to school and societal requirements	3.7
Refering students to appropriate community agencies	1.1
TOTAL	10.0

AREA OF COUNSELOR RESPONSIBILITY	ESTIMATED HOURS SPENT
CONSULTING	
Consulting with principals & teachers about BEHAVIOR problems	2.5
Consulting with principals & teachers about LEARNING problems	1.9
Helping teachers modify teaching techniques	0.7
Training teachers for academic and vocational advising	0.6
TOTAL	5.7
OTHER DUTIES	
Record-keeping	5.5
Communicating with parents	2.7
Coordinating the school testing program	2.0
Working on curriculum planning	0.8
TOTAL	11.0
GRAND TOTAL	43.5

Figure IV-25: AVERAGE OF ESTIMATES BY COUNSELORS OF TIME SPENT ON MAJOR DUTIES AND RESPONSIBILITIES.

16. What are counselors' priorities among the major duties and responsibilities?

ANSWER: The counselors' highest priority among major duties and responsibilities is Curriculum Related Counseling, followed by Personal Adjustment Counseling and Consulting. Counselors would reduce the amount of time they spend on Other Duties (specifically record-keeping). They would increase the amount of time they spend overall.

SUPPORTIVE DATA:

Counselors estimate that they should spend six to seven more hours per week on their duties, although their estimates of time they do spend already exceeds 40 hours.

When we adjust the number of hours counselors estimate they should spend to the base of 43.5 hours they report spending, we find that counselors would spend about the same percentage of their time on Curriculum Related Counseling. However, they would reduce their Other Duties (specifically record-keeping) and use the time saved for Personal Adjustment Counseling and Consulting. The only major duty where counselors indicate they should allocate their time differently is record-keeping.

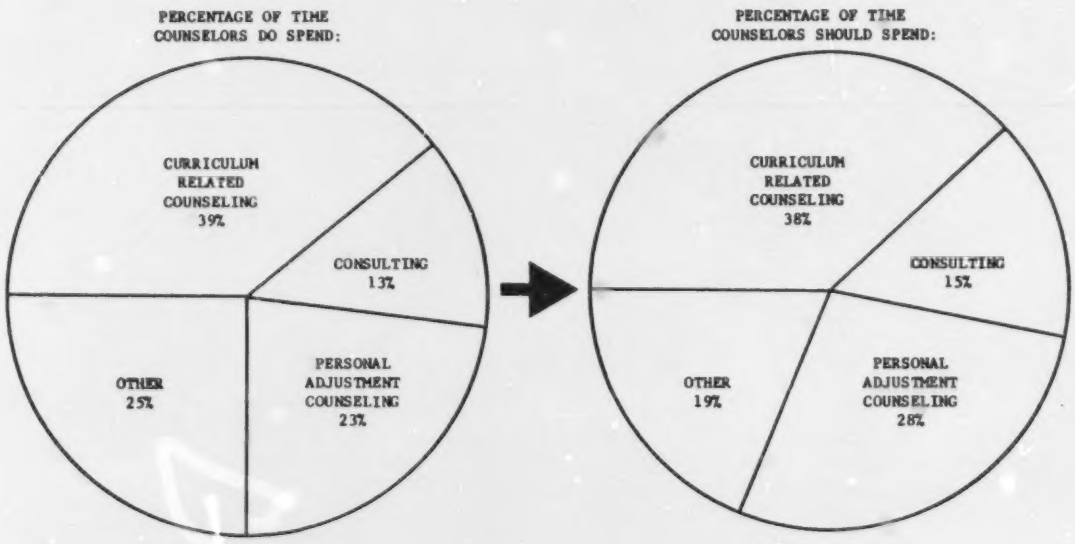


Figure IV-26: PERCENTAGE OF TIME COUNSELORS REPORT THEY SPEND VERSUS THE PERCENTAGE THEY THINK THEY SHOULD SPEND ON THEIR MAJOR DUTIES.

Figure IV-26 above shows the changes counselors would make in the time spent on major duties. These percentages are based on counselor estimates of time presented in the following table, Figure IV-27.

AREA OF COUNSELOR RESPONSIBILITY	HOURS ESTIMATED ACTUALLY SPENT	HOURS ESTIMATED SHOULD SPEND[a]
CURRICULUM RELATED COUNSELING		
Providing information about h.s. graduation and college entrance requirements	4.4	3.6
Counseling individual students on post-graduation plans	3.5	4.3
Informing students about h.s. vocational training opportunities	3.2	3.6
Assisting students on preparing 4-year course plans	3.1	2.3
Helping students interpret test scores and assess their own abilities	2.6	2.8
TOTAL	16.8	16.6
PERSONAL ADJUSTMENT COUNSELING		
Counseling students about their current personal problems	5.2	6.4
Counseling students on adjusting to school and societal requirements	3.7	4.6
Refering students to appropriate community agencies	1.1	1.2
TOTAL	10.0	12.2
CONSULTING		
Consulting with principals & teachers about BEHAVIOR problems	2.5	2.0
Consulting with principals & teachers about LEARNING problems	1.9	2.2
Helping teachers modify teaching techniques	0.7	1.2
Training teachers for academic and vocational advising	0.6	1.3
TOTAL	5.7	6.7
OTHER DUTIES		
Record-keeping	5.5	1.8
Communicating with parents	2.7	2.9
Coordinating the school testing program	2.0	1.9
Working on curriculum planning	0.8	1.5
TOTAL	11.0	8.1

[a]The numbers in the "should spend" column were adjusted from the counselors' estimates ("should spend" = 50.2hrs.) to a base of 43.5 hours ("actually spent").

Figure IV-27: COUNSELORS' ESTIMATES OF CHANGES THEY WOULD MAKE IN THE NUMBER OF HOURS ALLOCATED TO EACH DUTY.

17. Are counselors available (quantity) and helpful (quality) to stud ts?

ANSWER: Yes, high school students report counselors are available. Students are seen promptly, and they have confidence in their counselor's professionalism. However, many students note it is too much of a hassle to get to see the counselor. Also, counselors are not increasing their availability through group work. Student-counselor interaction remains primarily curriculum related. Counselors see their caseloads and paperwork decreasing their availability.

Yes, high school students who interact with counselors report counselors are helpful. The percentage of students who claim help, across a wide variety of concern areas, is about 65%. However, the areas actually discussed by large numbers of students are primarily curriculum related, and not all students use their counselors. While counselors are available and are helpful to those interacting with them, our former students are evenly split on their counselor's helpfulness. Even worse, in the area of helping them decide what to do after high school, 82% disagree that their counselor was helpful.

SUPPORTIVE DATA:

Reports of High School Students

Sample. ORE staff administered the Counselee Questionnaire in early December to 36 Social Studies classrooms randomly selected to represent the district as a whole. The 835 students included approximately 4% ninth, 25% tenth, 41% eleventh, and 30% twelfth-graders. The sample closely approximated the district in the ethnic makeup.

Approaching counselors. While 85% of students report they feel they can talk to counselors about course planning or scheduling, and 73% feel they can talk about future career choices, only 26% feel they can talk to counselors about personal concerns.

Initiating contacts. Contacts between students and counselors tend to be initiated by students. Some students (36%) report that counselors have sent for them or that teachers have suggested they see a counselor; however, 73% of the students report they have asked to see a counselor. The number of times students report talking to counselors averaged about twice per student for the first quarter.

Sixty percent of the students report that when they ask to see a counselor, they get to see one the same day. The majority of the rest report it takes only a couple of days to get in to see a counselor.

Few students (16%) report meeting with counselors in small groups; only a few more (29%) report having had a counselor meet with one of their classes.

Students do not report their parents having conferences with counselors; if telephone conferences occur, students either don't know about them or don't consider them "conferences."

Attitude toward counselors. There is a pattern of strong student confidence in counselors. Students feel they can really talk to counselors (82%), they can talk privately (82%), they know what counselors do (87%), counselors do listen (88%), and counselors can help them (72%). The primary factor which does seem to keep students from talking to counselors is that "it is too much hassle" to some students (41%).

Quantity and quality of service. Students talk to counselors most about their course plans, course schedules, and graduation requirements. They tend not talk about personal problems or understanding how to get along with other students, different ethnic groups, or their parents.

The following table gives the percentage of those students who discussed each concern with a counselor and who report it "helped them begin to solve their problems" or it "really helped them make some decisions." The areas are in order of percentage of students who discussed the area.

The average percentage was 65% and percentages ranged from about 60% to 70% (except for graduation requirements with 79%, and understanding how to get along with teachers with 49%).

AREA OF DISCUSSION	% DISCUSSING	% DISCUSSING WHO ARE HELPED
Course schedule for quarter	66%	72%
Graduation requirements	47%	79%
Four-year course plan	46%	70%
Understanding my grades	34%	71%
College Entrance requirements	30%	63%
High School vocational training	25%	70%
Educational opportunities after high school	24%	61%
Understanding my abilities	24%	68%
Understanding my standardized test scores	22%	59%
Career opportunities after high school	20%	64%
Learning to get along in the "system"	20%	68%
Getting along with teachers	19%	49%
Current personal problems	13%	61%
Getting along with other students	11%	65%
Getting along with parents	7%	68%
Getting along with other ethnic groups	9%	65%

Former Student Questionnaire

Eight months after graduating, AISD students are completely split on whether counselors were helpful in planning their high school program. About half the students disagree or strongly disagree and about half the students agree or strongly agree that counselors were helpful. Furthermore, 82% of our graduates disagree (half of these strongly) with the statement, "A counselor helped me decide what to do after high school."

"Lead" Counselor Reactions to the Counselee Questionnaire

Results of the Counselee Questionnaire were discussed with a "lead" counselor at each high school. Counselors responded that the questionnaire results were largely believeable. The counselors cited two major factors they felt kept them for initiating more personal contacts with students: (1) paperwork (scheduling, course changes, letters of reference for seniors) and (2) caseload. Counselor caseload across the district (excluding vocational counselors) is 454 students per counselor.

On the question of "too much hassle", counselors believed that there were probably many reasons students feel it is difficult to see a counselor. These may include lines in the counselor's office at course choice time, having to make an appointment ahead of time, the counselor being busy with urgent paperwork, and teacher resistance to releasing students from classes.

Several of these counselors expressed an overall frustration and a feeling that there is no way they can adequately provide all the services listed as their responsibilities, for all the students assigned to them.

18. Would students attend a summer quarter?

ANSWER: No, not without substantial efforts aimed at changing their current desires.

SUPPORTIVE DATA:

During the spring quarter we collected data from tenth through twelfth-graders on our Student Questionnaire. One item asked, "Which three quarters would you choose to attend school if there were a summer quarter which offered the same curriculum as other quarters and it was free?" Results were very similar at each grade level. These results are based on 942 students representing all our high schools. Eighty-one percent of these students would still want summer off, though 12% would go year-round and graduate early.

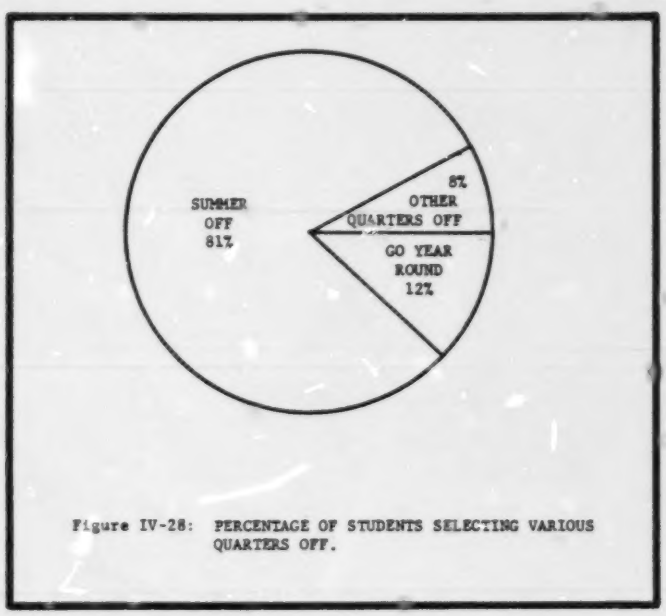


Figure IV-28: PERCENTAGE OF STUDENTS SELECTING VARIOUS QUARTERS OFF.

These data may represent a drop since last year in the percentage of students desiring to go year-round. Last year's estimates (which included 9th grade) were that 16-18% of the students would desire to graduate early.

19. Would teachers, counselors, and other staff work a summer quarter?

ANSWER: No, not in sufficient numbers to staff the high schools, particularly in certain curriculum areas. Only small percentages of our teachers, counselors, and non-teaching staff would explicitly choose to work a summer quarter. However, there is a potential pool of staff made up of those willing to work non-traditional schedules (e.g. all four quarters, only 2 quarters, or different quarters in different years).

SUPPORTIVE DATA:

What Quarter to Have Off

During January, 1977, we collected questionnaire data from all high school teachers, counselors, and non-teaching staff. Among the full set of items one asked:

"If AISD were to institute year-round schooling, what quarter would you choose to have off?"

POSSIBLE QUARTER OFF	PERCENTAGE		
	TEACHERS (N=766)	COUNSELORS (N=46)	NON-TEACHING STAFF [a] (N= 137)
Summer	49	46	49
Fall	4	7	1
Winter	4	7	2
Spring	4	2	4
Variable[b]	39	39	43

[a] Office staff, assistant principals, deans, librarians, and registrars
[b] The response opportunity read "different quarters in different years"

Curriculum Areas

The data for teachers depends on a teacher's curriculum area as the table below points out:

% WANTING SUMMER OFF	CURRICULUM AREA
21-30%	Art
31-40%	Industrial Arts, Science
41-50%	Foreign Language Language Arts, Mathematics, Social Studies
51-60%	Driver Education, Homemaking, Special Education
61-70%	Physical Education
71-80%	Music, Business, Health

Year-Round Work

Another item on the questionnaire asked, "If AISD were to institute year-round schooling and allow you to work any number of quarters, how many would you choose to work?" The percentage of staff responding "four" was 9% (teachers), 23% (counselors), and 26% (non-teaching staff).

20. What are the perceived problems and benefits of year-round schooling?

ANSWER: The major problems with year-round schooling, according to high school principals and secondary instructional coordinators, are finances, logistics, and community acceptance. A majority of high school principals saw no benefit to year-round schooling other than facilities utilization and they are 2:1 against expanding the fourth quarter. Secondary instructional coordinators see more benefit, particularly financial, but only fifty percent would favor expansion.

SUPPORTIVE DATA:

Problems

High school principals and secondary instructional coordinators agreed in their interviews that financing (e.g. Would the State finance a fourth quarter?), logistics (e.g. Which students and teachers would be in school and when?), and community acceptance (e.g. Would parents send their children in the summer?) would be the major problems of year-round schooling. Their responses are tabled below:

HIGH SCHOOL PRINCIPALS		SECONDARY COORDINATORS	
PROBLEM CITED	N	PROBLEM CITED	N
Logistics of who goes or teaches [illegible]	5	Logistics of who goes or teaches when	12
Finance	4	Finance	9
Community not ready for it	3	Community not ready for it	4
Attendance, ADA for state funding	2	Not enough students to offer courses	2
Teachers and staff need summer off	1	Students would graduate early	2
Interference from students not enrolled	1	Low student interest	1
Not enough students to offer courses	1	Not enough time in year	1
		Athletic department would not like it	1
		Care of equipment and facilities	1

Benefits

In their interviews five principals stated they could see no benefits other than increased use of facilities. Two suggested that students might graduate early or take a wider variety of courses. Two mentioned that it might help students or local employers with employment. One said teachers could teach year-round, and one said teachers could take university level courses at times other than the summer.

The primary benefit of year-round schooling listed by the 19 secondary instructional coordinators interviewed was the financial advantage (12) to teachers, students, and the job market (i.e. teachers earning more by working four quarters, students working other than summer quarter). Other benefits cited were: Choice of vacation time (9), early graduation (6), variety of course work available and ease in making up courses failed (5), and smaller classes (2).

Recommendations

When high school principals and secondary coordinators were asked in their interviews what AISD should do regarding year-round schooling, the largest number in each group (not a majority) preferred continuing limited tuition-based summer school. A tally of their recommendations is tabled:

RECOMMENDATIONS	NUMBER OF PRINCIPALS	NUMBER OF COORDINATORS
Consider dropping even the limited tuition-based summer school	2	1
Continue the limited tuition-based summer school	4	7
Plan to expand the summer school on a non-tuition basis	2	6
Act as quickly as possible to get full year-round schools	1	2

21. Are students taking appropriate courses?

ANSWER: Graduates of our high schools, in fact 75% of them, believe high school gave them adequate preparation for their present activities. Nonetheless, these former students can discriminate clearly certain course areas which they judge were the most appropriate for them, that is, useful for their present activities. In the required areas, Mathematics and Language Arts stand out as the areas where students took courses they judge appropriate. Science and Social Studies courses are judged far less appropriate. In the elective areas, Vocational Cooperative Education, Driver Education, and Business Education stand out as areas with appropriate courses. Homemaking, Foreign Languages, and the Fine Arts are judged far less appropriate.

A study of courses taken and credits earned by AISD seniors shows that four-year college bound students have appropriately taken 8 more academic courses, spread across the four required academic areas plus Foreign Lanugages, than students not planning to attend four year colleges. The non-college bound students have taken 5 more vocational courses.

Despite graduates' judgment of the adequacy of their preparation; despite their appraisal of certain course areas as appropriate; and despite selection of courses by college bound and non-college bound students from appropriate curriculum areas; two-thirds of AISD graduates still believe high school should have required more of them.

Breakdowns in the process by which students select appropriate courses are occuring in three areas: The task, the students themselves, and the people who advise.

First, 50 to 60% of students, teachers, counselors, and non-teaching personnel believe there are too many courses to choose from, and that the schools may not allow enough time for students to think about course choices. The task is just too difficult.

Second, students may not be mature enough to make the choices demanded of them by the curriculum, they may not make use of the time the schools allow them, and they may not have a clear understanding of their own abilities, goals, and needs.

Third, students own top priority is someone who can help them plan, and there may not be those advisors available who know both the individual student and the total curriculum well enough to furnish that help.

SUPPORTIVE DATA:

Courses Students Take

Evaluation Question 10 supplies complete data on courses taken by college bound and non-college bound students.

By the end of the second quarter of their senior year, students have taken and earned an average of about 60 credits of the 63 required. About 34 of these credits are in required academic area , five more credits than required. Students have also completed the required courses in Physical Education and Health.

There is no single area which dominates the elective courses taken. For the average student, about five elective credits have been taken and earned in the required academic areas, and about 19 in the elective areas. Students have earned an average of 3.4 credits in Fine Arts, 3.3 in Vocational Cooperative Education, 2.7 in Business Education, 2.6 in Foreign Languages, 2.1 in Industrial Arts, and 1.2 in Homemaking. The students have about 3 more elective credits to earn during the last quarter of their senior year.

College bound students have taken and earned about four more quarter credits overall than non-college bound, and the college bound have earned 8 more credits in academic areas. Non-college bound students have earned 5 credits more in vocational areas than college bound.

Appropriate Courses: Students

Four-fifths of the 950 ninth through twelfth grade students sampled agree they know why they are taking the courses they are in. Furthermore, four-fifths believe their elective courses have helped them develop new interests and abilities. While two-thirds of our students agree that the courses they are taking will be important in the future, one-third disagree. Almost half of our students report that they have been stuck in courses they did not really want.

The table below presents the percentage of students who agree with the statements about the appropriateness of their courses.

ITEM	PERCENTAGE AGREEMENT
I know why I'm taking what I'm taking	83%
The electives I've taken have helped me develop new interests and abilities	80%
I can see how most of the courses I'm taking will be important in the future	66%
I've been stuck in courses I didn't really want because it was too late to change	47%

Appropriate Courses: Former Students

Sixty-five of the 190 responding graduates agree that AISD high schools should have required more of them. Nonetheless, three-quarters also agree that, overall, high school gave them adequate preparation for their present activities. Only a small percentage, about 6% of our graduates, strongly believe they were not adequately prepared. Taken together, these items seem to be saying, "We can get by fairly well on what we learned, but it might have helped if you had required more of us."

Additional information was obtained by asking former students to rate the usefulness of the required and elective curriculum areas (as well as extra-curricular activities) in preparing them for their present activities. The table below presents for each curriculum area (1) the Valid N (number of students taking courses in and therefore, rating the area), (2) net percentage of very useful judgments, (the percentage of "very useful" ratings minus "not useful" ratings), and (3) the percentage of "somewhat useful" ratings.

CURRICULUM AREA	VALID N FOR AREA	% "VERY USEFUL" MINUS "NOT USEFUL"	% "SOMEWHAT USEFUL"
REQUIRED AREA			
Math	192	+47%	41%
Language Arts	182	+35%	42%
Physical Education	182	- 4%	37%
Health	186	- 5%	42%
Science	190	-14%	34%
Social Studies	186	-18%	46%
ELECTIVE AREA			
Vocational Cooperative Ed.	52	+52%	21%
Driver Education	172	+40%	29%
Business Education	105	+25%	43%
Vocational Pre-Employment	35	+23%	26%
Student clubs, organizations, activities	164	+10%	37%
Industrial Arts	89	+ 7%	39%
Homemaking	84	-14%	33%
Art	94	-28%	29%
Foreign Language	141	-32%	28%
Music	98	-36%	22%

Among the required areas, Mathematics and Language Arts clearly stand out as areas where the percentage of students believing the area to be useful is relatively high. No other required areas has a net positive percentage of very useful ratings. Of course, about 40% of the students see all these areas as somewhat useful.

Among the elective areas, Vocational Cooperative Education, Driver Education, and Business Eduction stand out. For Vocational Cooperative Education and Driver Education, the net percentages of very useful judgments are 52% and 40% respectively, comparable to the Mathematics and Language Arts ratings. For Business Education the net percentage of very useful judgments is 25%, but another 43% indicate the area was "somewhat useful."

An additional three areas: (1) Vocational Pre-Employment, (2) Extracurricular Activities, and (3) Industrial Arts have net positive percentages of very useful judgments along with substantial percentages of "somewhat" useful judgments. Homemaking is atypical, among the elective vocational areas, with more "not useful" than "very useful" ratings. Art, Foreign Languages, and Music all get "panned" in terms of preparing students for present activities. This does not mean these students have not enjoyed or learned in these areas--just that these areas are not judged immediately relevant to their present activities.

These responses from former students should not form the basis for immediate curricular change, in and of themselves. One needs to consider a broader range of information and professional judgment (e.g. see Figure IV-29 on the next page).

Course Selection: Teachers, Counselors, and Non-teaching Personnel

There are two broad areas in selecting appropriate courses where at least half of our teachers, counselors, and non-teaching personnel all indicate that half or more of our students are not exhibiting desirable behaviors. First, schools may not be allowing enough time for thinking about course choices. Second, students may not really be thinking enough about what courses they need particularly for graduation and their special career plans.

The table below gives the percentages of teachers, counselors, and non-teaching personnel who responded "true for most or nearly all students" to the statements about advising. The teacher responses vary by school and by curriculum area. Complete data for the different schools and curriculum areas are available in our Final Technical Report, Appendix J.

Importance of arts to education reported

By DONALD SANDERS

WASHINGTON (AP) — A panel of 25 prominent Americans said over the weekend the arts, far from being frills, can perform a useful function as essential as the three Rs.

The committee headed by David Rockefeller Jr., following a two-year study, urged the nation to reverse the historic segregation of the arts from education. Such a move, it said, would not only teach children about the arts themselves but would enhance learning in general.

"This report appears at a time of contradictory trends," the 330-page volume says. "On the one hand, the arts are flourishing as never before in America. . .

"On the other hand, arts education is struggling for its life. Music and arts teachers are losing their jobs on a wholesale basis in some cities. Why? Because we have not made the connection between our desire for art and our need for art."

The report titled, "Coming to Our Senses," contains 92 recommendations addressed to every level of government as well as to teachers, arts specialists, school administrators and parents.

It proposes that the U.S. Office of Education be raised to Cabinet status, with a special adviser for arts and education to serve the new secretary.

It calls for creation of a national center for arts in education, a federal agency that would coordinate information about artists, programs, funding and research.

The lavishly illustrated volume, which cost about $303,000 to research and produce, will be issued Tuesday by McGraw-Hill. It was supported by the National Endowment for the Arts, the Office of Education, and more than a dozen foundations.

The volume cites a number of instances where innovative integration of arts instruction into schools stimulated children to higher achievement in traditional subjects. One example is the Mosswood Mini-School in Oakland, Calif., where children have six to eight more periods devoted to art instruction than the average.

It was found that those children made an average reading gain of two times the normal rate — 1.28 years in six months — and an average math gain of 1.25 times the normal rate.

Source: Austin-American Statesman
5-23-77

Why Teach Music?

Music is a science

It is exact, specific, and it demands exact acoustics. A conductor's full score is a chart, a graph which indicates frequencies, intensities, volume changes, melody, and harmony all at once and with the most exact control of time.

Music is mathematical

It is rhythmically based on the subdivisions of time into fractions which must be done instantaneously, not worked out on paper.

Music is a foreign language

Most of the terms are in Italian, German, or French, and the notation is certainly not English - but a highly developed kind of shorthand that uses symbols to represent ideas. The semantics of music is the most complete and universal language.

Music is history

Music usually reflects the environment and times of its creation, often even the country and/or racial feeling.

Music is physical education

It requires fantastic coordination of fingers, hands, arms, lip, cheek, and facial muscles, in addition to extraordinary control of the diaphragmatic, back, stomach, and chest muscles, which respond instantly to the sound the ear hears and the mind interprets.

Music is all these things, but most of all, Music is art

It allows a human being to take all these dry, technically boring (but difficult) techniques and use them to create emotion. That is one thing science cannot duplicate: humanism, feeling, emotion, call it what you will.

THAT IS WHY WE TEACH MUSIC!

Not because we expect you to major in music
Not because we expect you to play or sing all your life
Not so you can relax
Not so you can have fun

BUT - so you will be human
so you will recognize beauty
so you will be sensitive
so you will be closer to an infinite beyond this world
so you will have something to cling to
so you will have more love, more compassion, more gentleness, more good - in short, more life.

Of what value will it be to make a prosperous living unless you know how to live?

THAT IS WHY WE TEACH MUSIC!

Source: Pennsylvania Music Education Association

Figure IV-29: INFORMATION ON TEACHING THE FINE ARTS.

AREA OF ADVISING	PERCENTAGE RESPONDING TRUE FOR MOST OR NEARLY ALL STUDENTS		
	TEACHERS (N=720)[a]	COUNSELORS (N=48)	NON-TEACHING PERSONNEL (N=70)[a]
School allows enough time & thought for advising	54%	54%	47%
Students know courses needed to graduate	42%	53%	48%
Students think about course choices	26%	32%	19%
Students know special courses needed for career plans	20%	13%	26%

[a]Approximate; many did not make judgments

Furthermore, about 50% of the counselors and 60% of the teachers and non-teaching personnel indicate that for half or more of our students there are too many courses for students to make appropriate choices.

Course Selection: Students

When responding to the same items about advising, almost all 10th through 12th grade students (N=950) say they know what courses they need to graduate. About sixty percent feel that they know what courses they need for their plans after high school. Fifty percent believe they were encouraged to take time to think about course choices, and less than a quarter of the students indicate that they were "just told what courses to take." Sixty percent of the students believe there are so many courses it's hard to decide which ones to take.

When students were asked what one factor was most important in selecting appropriate courses, three factors emerged: First, "Someone who is able to help you plan" (37%), second, "A good idea of what you're going to do in the future," (30%), and third, "Enough time to choose courses" (17%).

Course Selection: Principals (N=9) and Secondary Instructional Coordinators (N=18)

Number of courses. Seven principals but only one coordinator believe that there are too many courses in the curriculum. Most coordinators (14) are satisfied with the number of courses offered in their curriculum areas.

Sequencing courses. Seven principals but only four coordinators believe that there is a need for more precise statements of prerequisites and clearer designations of the sequence for taking courses. Only one principal, but thirteen coordinators, believe there is no problem with sequencing.

Graduation requirements. Neither principals nor coordinators believe that knowledge of graduation requirements is a severe problem.

Student maturity. Twenty-five percent of both the principals and coordinators making judgments believe students are mature enough to make the choices demanded by the curriculum. The majority of principals believe students are not mature enough; the majority of coordinators attribute partial maturity to students making choices.

RESPONSE	FREQUENCY	
	PRINCIPALS	COORDINATORS
Mature enough	2	4
Somewhat mature	1	10
Not mature	5	2

NOTE: One principal and three coordinators did not reply.

Getting students in the right courses. Five principals and 14 coordinators cite lack of awareness and knowledge on the part of both students and their advisors as the major problem in getting students into appropriate courses. Students and their advisors simply do not know enough about either the students' abilities, goals, and needs or the available curriculum opportunities.

22. From whom do students receive most of their information and advising?

ANSWER: Students receive most of their information and advising from subject area teachers.

SUPPORTIVE DATA:

This year we asked students, teachers, counselors and non-teaching high school personnel who actually does most of the course advising. Figure IV-30 below shows the responses of those replying to the question. For this question we show the non-teaching group as professional (assistant principals, deans, and librarians) and non-professional (registrars, secretaries, clerks, and aides), because the two groups responded quite differently.

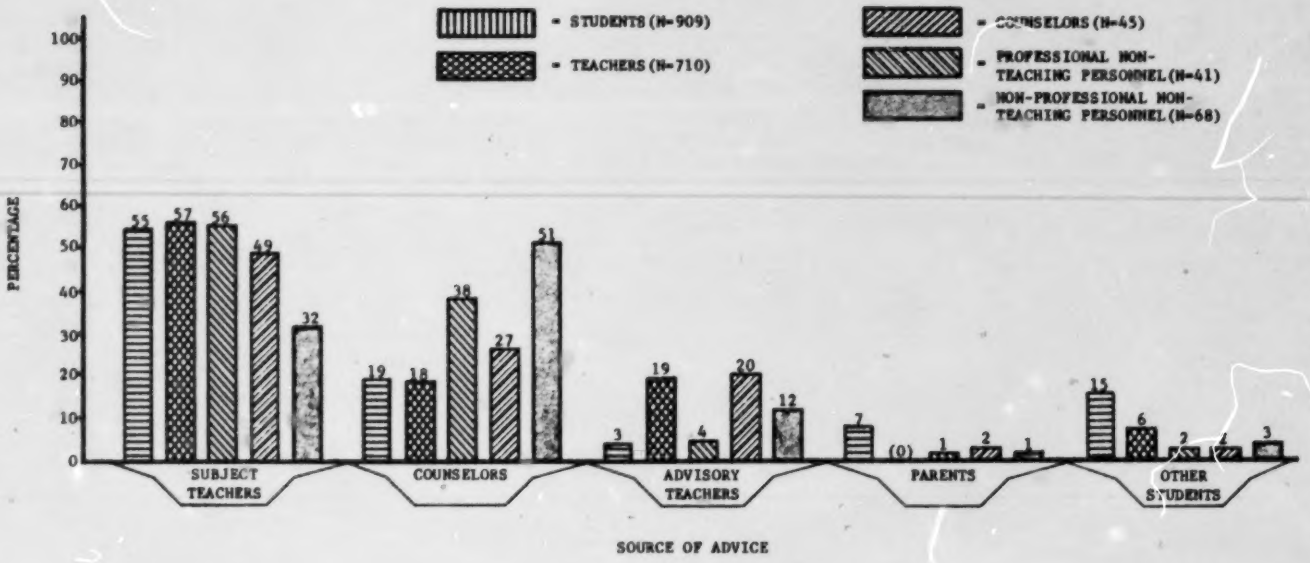


Figure IV-30: WHERE STUDENTS GET THEIR ADVICE. Percentage of students, teachers, counselors, and non-teaching personnel choosing each source of advice to the question, "Who actually does most of the course advising?".

All groups except the non-professional non-teaching personnel agree that most advising comes from subject area teachers. Counselors and non-professional personnel attribute substantially more advising to counselors than others do, and students, more than other groups, tend to attribute advice to parents and friends.

There are some differences among teachers by school and by curriculum area, but the pattern of subject area teachers, followed by counselors, remains. This same result was reported by teachers in the Teacher Interviews conducted last year. Counselors also report that when they advise students they receive their information from teachers and other counselors, besides extensive use of the High School Information Guide.

23. How do students use the Information Guide and four-year "course plan" to select appropriate courses?

ANSWER: All high school students receive the High School Information Guide. Data from ninth graders suggest that students use the High School Information Guide; they report it as the most important source of information in selecting courses. All counselors and half the teachers who advise also use the Information Guide to help students select courses.

For best use of the High School Information Guide, course titles need to communicate more clearly what courses are. Students believe the course descriptions are understandable, but other groups believe descriptions also need improvement.

Half the students do not use the four-year course planning form from the High School Information Guide, and advisors do not use them in helping students select courses, though students may use different forms provided by some high schools.

Most ninth grade students have their course choices on the planning form reviewed by someone in junior high school, but only half the tenth through twelfth graders report having their choices reviewed for appropriateness.

SUPPORTIVE DATA:

Summary

The supportive data includes information on how students use the High School Information Guide, as reported by the students and others involved with students' course selection, and on how advisors use the Information Guide.

Ninety-five percent of our ninth grade students received a copy of the High School Information Guide, and they report receiving more help from it than from any other source of information or advice.

Half of all high school students think they can tell from course titles what courses will be, but half cannot tell. High school principals and secondary instructional coordinators are also evenly split on whether the titles communicate.

Eighty percent of all high school students report they can understand course descriptions, but school staffs believe only half the students can understand the descriptions. The high school principals are split on whether descriptions are adequate, but the majority of coordinators believe they are.

Students and school staffs agree that probably less than half of all high school students use the four-year course planning form, and only about half of 10th through 12th grade students have their course choices reviewed to see if they are appropriate. Eighty percent of ninth graders report having their course choices reviewed in junior high school.

All counselors and half the teachers base their advising on the Information Guide, but only a quarter of the counselors and teachers refer to the students' four-year course planning form from the High School Information Guide when they advise.

Student Use of the Information Guide

All ninth through eleventh grade AISD students had the High School Information Guide given to them in Spring, 1976, before they made course choices for 1976-77. Ninety-five percent of the ninth graders (N=768) reported having received an Information Guide in the eighth grade. The Information Guide contains listings of courses, with titles and descriptions, and a four-year course planning form to help students select appropriate courses.

Course titles. About half of all the students believe they can tell from the titles in the Information Guide what courses will be, but half cannot tell.

Course descriptions. Eighty percent of the students report they can understand the paragraphs which describe the courses in the high school curriculum.

Course planning forms. Only about 40% of the students report using the four-year course planning form to help them choose courses, and only about half the tenth through twelfth grade students have their choices reviewed to see if they are appropriate. Eighty percent of the ninth graders, however, had their choices selections reviewed.

Other Reports of Student Use of High School Information Guide

Teachers, counselors, non-teaching personnel, principals, and secondary instructional coordinators were asked about students' use and understanding of the High School Information Guide.

Course titles. Consistant with our student reports, five principals and seven coordinators think that course titles are now appropriate, while the other four principals and twelve coordinators believe titles should still be improved.

Course descriptions. Whereas 80% of the students report understanding course descriptions, two-thirds of the teachers, counselors, and non-teaching personnel believe that half or less of the students can understand these course descriptions. Five principals and twelve coordinators think course descriptions are now adequate, but four principals and three coordinators think descriptions could still be improved.

Course planning form. Corroborating the students' own reports, "hardly any" or only "some" students use the four-year course planning form, according to three-fourths of the counselors, two-thirds of the teachers, and over half the non-teaching personnel. Similarly, three-fourths of the counselors and half the teachers and non-teaching personnel report that "hardly any" or only "some" students have someone check to see if their choices are appropriate.

How the Information Guide is Used in Advising

While virtually all counselors and half the teachers who advise students "often" or "almost always" refer to the High School Information Guide, only one-quarter of the counselors or teachers base their assistance on the four-year course-planning forms contained in the Information Guide.

In the area of advisors' use of the Information Guide, four high school principals but no secondary instructional coordinators believe counselors know the Information Guide well. Five principals and 10 coordinators believe counselors are improving, or doing as well as can be expected considering the length of time the quarter system has been in effect. Only three coordinators believe counselors do not know enough about the information to advise.

Only one principal and four coordinators believe teachers know the Information Guide well enough to advise in all areas. Five principals and ten coordinators think teachers know enough to advise in their areas, but three principals and four coordinators believe teachers do not know enough to advise.

24. Where do teachers who advise get their information?

ANSWER: In general, high school teachers get their information from fellow teachers and their department heads, counselors, and the High School Information Guide and course outlines. Teachers in some high schools and certain curriculum areas may not fit this general pattern.

SUPPORTIVE DATA:

The table below gives the sources of information teachers might use in advising. For each source the percentage of high school teachers who "often" or "nearly always" use the information source is presented.

INFORMATION SOURCE	PERCENTAGE
Fellow teachers	56%
Department heads	52%
High School Information Guide	52%
Counselors/Vocational counselors	48%
Course outlines	41%
Student's 4-year course planning form	25%
My building administrators	15%
AISD-provided outlines of college requirements (e.g. green "High School-What Then?",or white sheets sent to parents	13%
Instructional coordinators	13%
The orange Vocational Supplement to "High School-What Then?"	8%

The pattern of use is not the same for teachers at different high schools and teachers in different curriculum areas. For example, on the High School Information Guide's use the range of percentages for teachers by high school was from 35% to 74%; for teachers by curriculum area it was from 14% to 76%. That is, in certain schools and in certain curriculum areas use may be much higher (or lower) than the districtwide results. The Final Technical Report, Appendix J, presents complete school-by-school and area-by-area data on these items.

25. Was the orientation provided to ninth-graders while they were in junior high sufficient to help them adapt to the high school curriculum?

ANSWER: Ninth-grade students judge that they have been able to adapt to the high school curriculum. Of course, about half do not yet know what courses they need for graduation or their post-graduation plans.

However, high school teachers believe half of the ninth grade students do not know why they are taking the courses they are in or how these courses relate to their future plans.

High school principals and secondary instructional coordinators both recommend giving junior high teachers more training on how to advise. They also recommend helping students learn to make intelligent decisions.

SUPPORTIVE DATA:

Ninth-Grade Students' Self Reports

Confidence. Ninth-grade students (N=768) themselves, when asked, "How do you feel about high school now?" responded (74%) that they had "a pretty good idea of how it all works" or were "pretty much on top of it." Only 3% "feel very lost in the shuffle." Eighty percent of the students believe they know why they are taking their courses, and 70% feel they had many possible choices and were encouraged to think about those choices. However, 40% do not know what courses they need for graduation, and 56% do not know what courses they need for their post-graduation plans.

Information Guide. Ninth-grade students received and used the High School Information Guide and 80% of them found the course descriptions understandable, but only 60% could tell from course titles what courses would be. Only 45% of the students used the four-year course planning form, but 80% had their course choices checked.

Students' use of information sources. Figure IV-31 on the following page shows the percentage of students who rated each of several information sources "very important" or "quite a bit of help" in choosing ninth-grade courses. About 60% of these students got major help from their junior high teachers and the High School Information Guide.

Teacher Judgments of Student Knowledge

Teachers (N=530) who work with enough ninth grade students to judge believe that half or less of these students know why they are taking the courses they are in or how the courses they are taking relate to their plans.

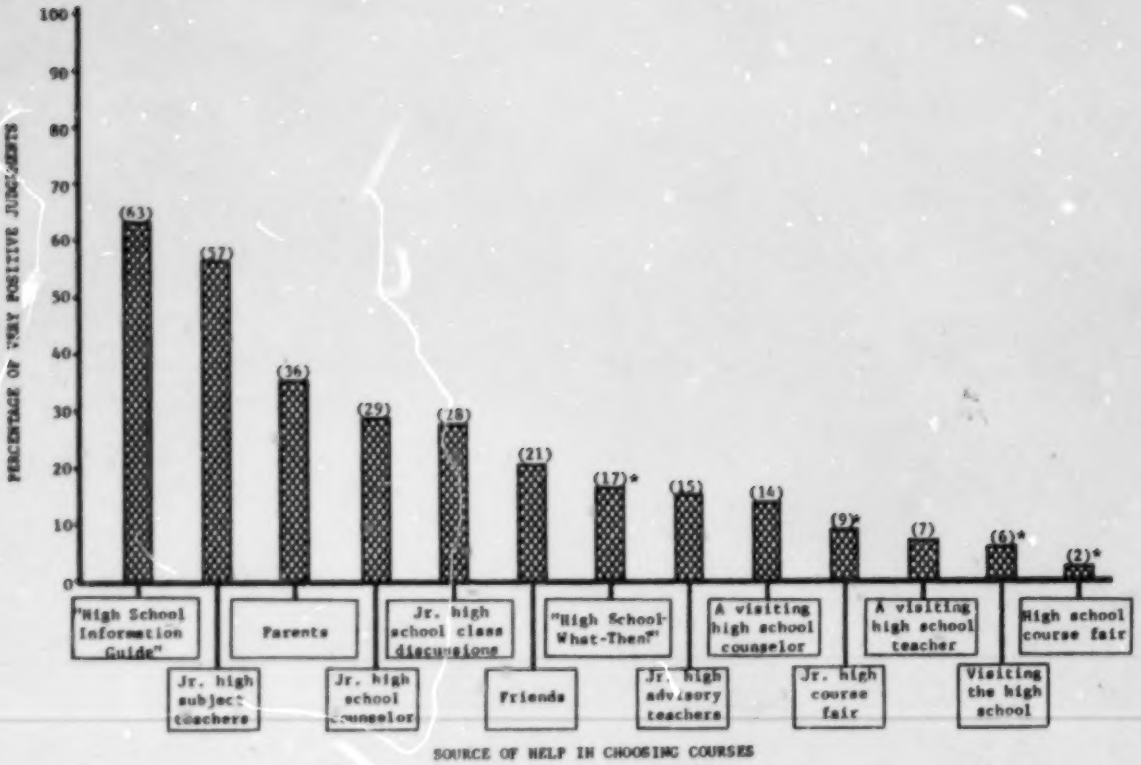


Figure IV-31: SOURCES OF INFORMATION JUDGED MOST HELPFUL IN CHOOSING COURSES. The percentage of ninth graders in our sample (N's between 737 and 759) indicating the source named was "quite a bit of help" or "very important" in choosing courses. (Bars asterisked indicate more than 1/3 of the students do not know what the source is).

High Schools' Fall Orientation

Twenty-eight percent of the ninth-graders did not attend the orientation conducted for them before school started, but 73% of those who did attend reported it helped them at least a little.

Principals' and Coordinators' Recommendations

There are two areas in which principals and coordinators agreed on recommendations to improve the junior high orientation: First, to have more training of junior high teachers by senior high teachers on how to advise and second, to train students to make intelligent decisions. Other suggestions were changing the timing of eighth grade orientation and identifying non-readers more carefully.

26. To what degree does the content of selected courses follow the course outlines?

ANSWER: In the courses selected in Science and Social Studies virtually all of the content of the examinations follows the outline. To the extent that final examination items index actual content taught, the content of these two courses closely follow the outlines. In the Language Arts course about half the tested material was review, not on the outline; however, nearly all teachers sampled taught it. In some courses it appears that what should be taught may not be on the outline.

While the content closely follows the outline, secondary instructional coordinators will have to judge whether the amount of coverage (about half the outline areas) reflects an appropriate level of selection among the outline areas on the part of teachers or whether it amounts to leaving out important material.

SUPPORTIVE DATA:

To answer this question we content analyzed final examinations submitted by teachers of 18 randomly sampled sections of one selected course in Social Studies, one in Language Arts, and one in Science.

Each item on each examination was coded to an area on the course outline. All the items on the Political Institutions and Decision-Making examinations were on that outline, and virtually all the items on the Introduction to Science examinations were on that outline. In Grammar II about half the items were not on the outline. These items were in several "review" categories.

A rather precise criterion was established to determine whether an area was judged "covered." The criterion was, purposefully, a lenient one. That is, we did not establish stringent definitions of what the content of the items was to be. Instead, we accepted evidence of testing of a more than superficial nature in the area.

Half the outlined content areas for these courses (19 of 36) were judged covered by the sampled final examinations. In Political Institutions and Decision-Making seven of the sixteen content areas were covered; in Grammar II eight of the 12 content areas were covered; and in Introduction to Science four of the eight content areas were covered. Figure IV-32 shows the percentage of the outline areas for each course which were covered by the sampled examinations.

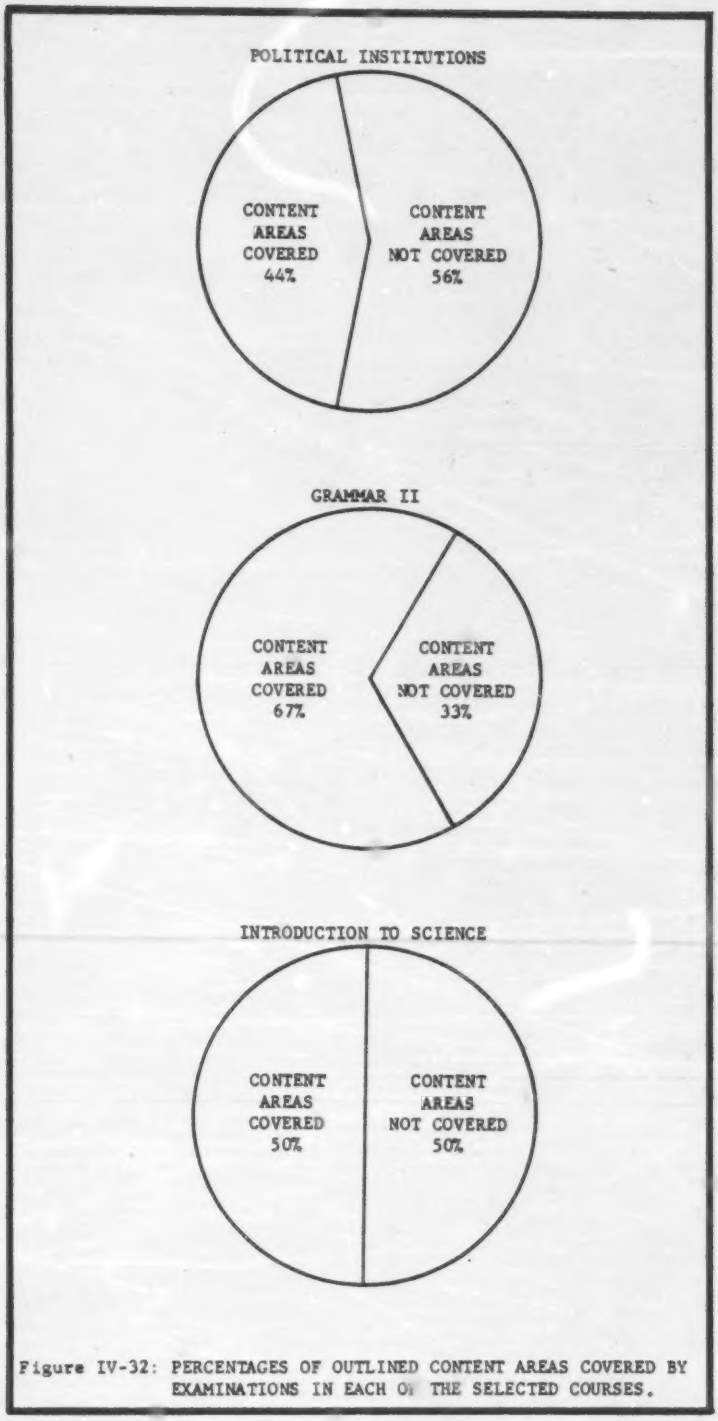


Figure IV-32: PERCENTAGES OF OUTLINED CONTENT AREAS COVERED BY EXAMINATIONS IN EACH OF THE SELECTED COURSES.

27. How much similarity in the course content of selected courses exists across the district?

ANSWER: To the extent that final examination items index actual content taught, there is high agreement among teachers at different schools on which content areas are covered. Even in the "review" areas of Grammar II, not on the course outline, there is agreement across teachers and schools. If the three courses selected are representative of our basic courses in their curriculum areas, there is evidence of districtwide consensus on course content.

SUPPORTIVE DATA:

Political Institutions and Decision-Making

In Political Institutions and Decision-Making there is high similarity among the various teachers and schools. Six content areas were covered by most examinations, two areas were not covered by any examination, and four areas received low coverage on most examinations. Few content areas had much teacher-to-teacher variability.

Grammar II

In Grammar II, there is agreement in most content areas. Eight areas are covered by most teachers, and four areas are given low coverage or not tested by most teachers. Even in the "review" areas, which are not on the outline, there is high similarity across the district. Three areas are covered by most teachers, while the other five are not.

Introduction to Science

In Introduction to Science also, there is agreement in most areas of the course content. Five areas were covered and one was not by most teachers. Two areas were covered by some examinations but not by others.

Figure IV-33 shows which examinations in each selected course had enough items in each content area to judge the area "covered" by the examination.

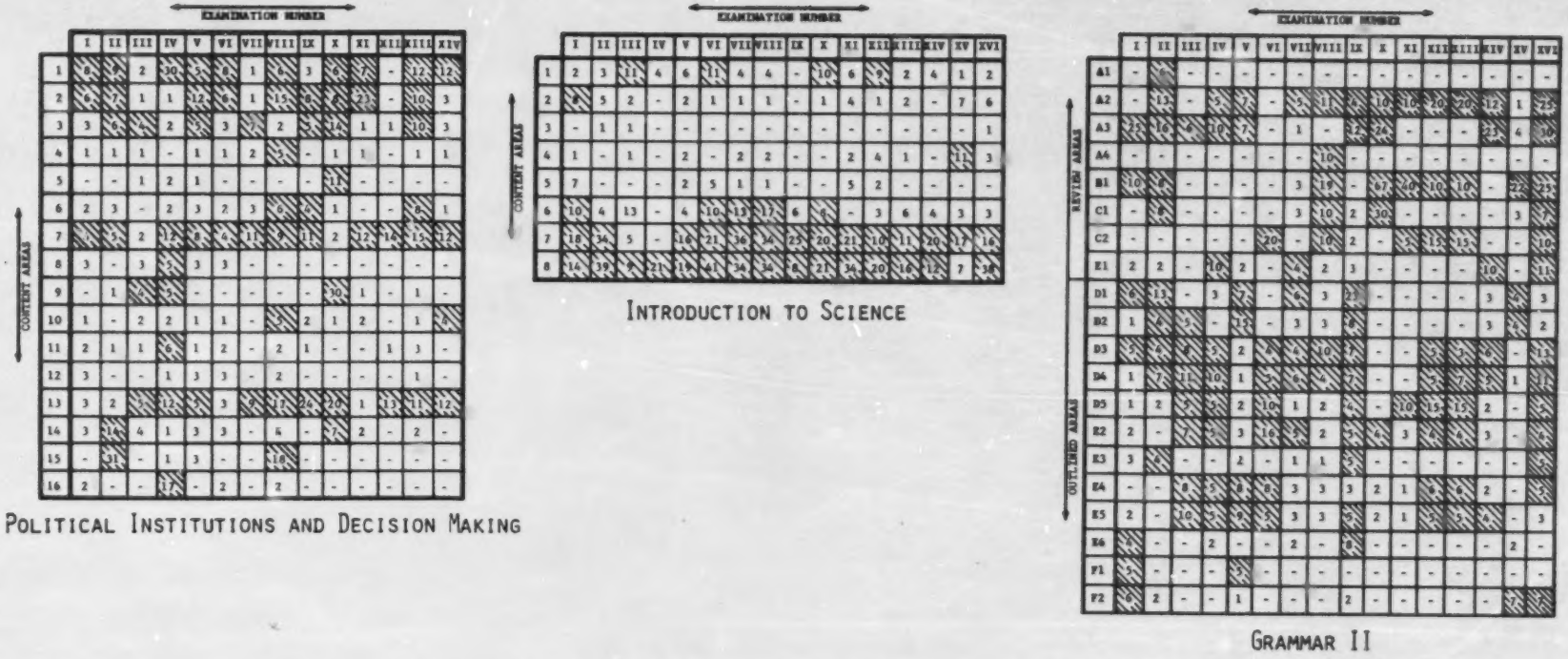


Figure IV-33: ITEMS "COVERED" BY EACH EXAMINATION. The number in each square indicates how many items on each examination are in that content area. The shaded squares indicate the areas which were judged "covered".

28. What percentage of final examination items require only that students select responses (e.g. multiple choice, true/false, or matching) as opposed to constructing responses (e.g. fill-in-the-blank, short answer, mathematical problems, or essays)?

ANSWER: Approximately 75% of all final examination items require only that students select responses from among given choices.

There is some evidence in the use of research papers in Social Studies and mathematical problems in Science of requiring more complex written responses; however, asking students to write even a complete sentence is uncommon. Less than 10% of the items ask students to construct a complete sentence.

SUPPORTIVE DATA:

About 75% of the final examination questions in Political Institutions and Decision-Making were of the type where students select from among given responses. Most of the rest required students to construct no more complex a written response than a complete sentence. Only 2% of all questions required writing several sentences to full paragraphs. A random sample of 4 sets of weekly and six-week tests was also analyzed for question type; the results were similar. These results indicate that on Political Institutions and Decision-Making final examinations students are being asked primarily to choose among responses and are not being asked to construct complex written answers. However, two teachers did require resesarch papers instead of final examinations.

About 75% of the final examination questions in Grammar II were of the type where students select from among given responses. The remaining 25% required students to construct responses, the most complex of which were writing or rewriting sentences. A random sample of 4 sets of weekly and six-week tests was also analyzed for question type. On these tests only 25% of the questions were the type where students select responses, while 75% required students to construct short answers. The weekly and six-week tests in this area demand more complex responses from students, but no items required writing more than a complete sentence.

About 70% of the final examination questions in Introduction to Science were the type where students select from among given responses. Of the rest, 10% required students to construct written responses, the most complex of which was a complete sentence, and 20% required students to work a given mathematical problem (such as 3.8m X 7m = _____) or construct a graph. A random sample of 4 sets of weekly and six-week tests was also analyzed for question type, and the results were similar. The student selected questions dropped to 60%, with the increase in mathematical calculations to about 30%. These results indicate that in Introduction to Science students are being asked to work some mathematical problems in addition to selecting among offered answers.

Figure IV-34 below shows the percentage of final examination items in each course of each type.

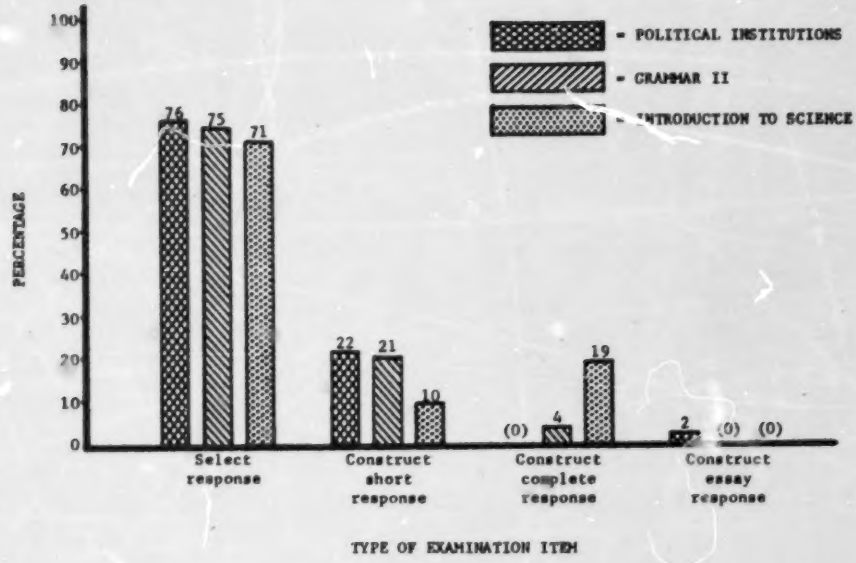


Figure IV-34: PERCENTAGE OF FOUR TYPES OF ITEMS FROM SAMPLED EXAMINATIONS OF THREE SELECTED COURSES.

B. MISCELLANEOUS EVALUATION QUESTIONS

Misc. 1. What do high school principals and secondary instructional coordinators believe are the benefits of the quarter system, besides the expanded curriculum?

ANSWER: The shorter time span for courses was the primary benefit cited. Both principals and coordinators cited several secondary benefits deriving from the shorter time span.

SUPPORTIVE DATA:

Principal and Coordinator Judgments

High school principals and secondary instructional coordinators were interviewed on the benefits of the quarter system. The most frequent benefit cited by principals was the shorter time span for courses. According to principals, courses move more rapidly and less frequently become monotonous; students correct poor course choices sooner, have fewer discipline problems, drop fewer courses, and cut fewer classes.

Secondary instructional coordinators were able to nominate more benefits of the quarter system. Coordinators also viewed the shorter time span for courses as a benefit. They felt that courses can be focused more sharply and be more sophisticated and concentrated. They also believed students could learn to value their time and could graduate sooner and teachers could teach their strongest areas.

Misc. 2. Is the quarter system judged an improvement over the semester system?

ANSWER: No. Teachers and counselors are equally divided between believing the quarter system is an improvement and believing it is not as good as the semester system. Non-teaching personnel believe 3.25:1 that the quarter system is inferior. Teachers evaluate the quarter system much more negatively this year than last year.

SUPPORTIVE DATA:

Teachers, counselors, and non-teaching personnel in AISD high schools were asked to evaluate the quarter system in comparison to the semester system overall, and on how well it prepares college bound and non-college bound students.

Overall

There were 822 teachers, counselors, and non-teaching personnel who responded to the question, "Is the quarter system an improvement over the semester system?" Of these responses, 560 gave positive or negative judgments; only 46% of the judgments were positive. Figure IV-35 below shows that while teachers and counselors were equally divided on whether they believe the quarter system is an improvement or is not as good as the semester system, non-teaching personnel believe 3.25:1 that the quarter system is not as good. The figure also shows change from last year, when teachers responded 2.9:1 in favor of the quarter system.

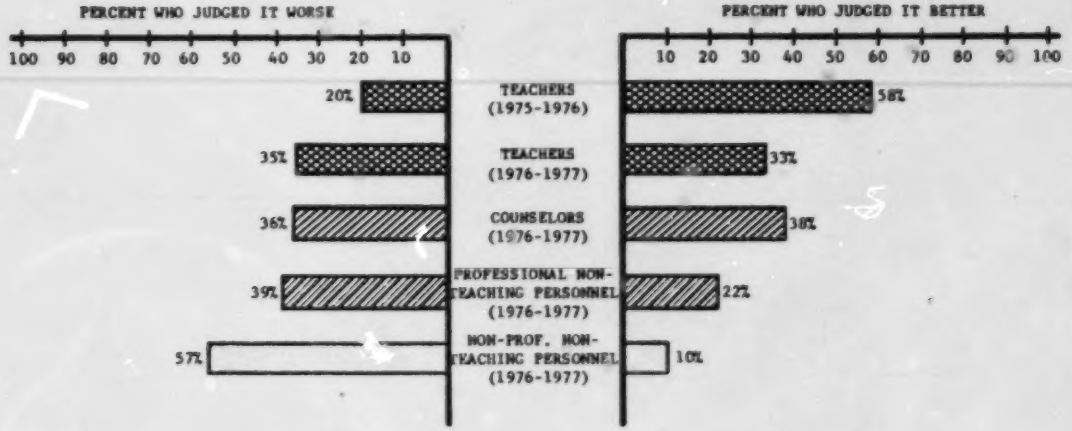


Figure IV-35: PERCENTAGE OF VARIOUS GROUPS OF AISD HIGH SCHOOL STAFF JUDGING THE QUARTER SYSTEM BETTER OR WORSE THAN THE SEMESTER SYSTEM. All data is 1976-77 data except for teachers, which is compared with the 1975-76 data.

There are definite differences among schools and curriculum areas. Crockett and Johnston teachers stand out as judging the quarter system better. There, teachers split 2:1 in favor of the quarter system. McCallum teachers also tend to favor the quarter system, but not as much. Anderson, LBJ, and Travis teachers split down the middle on this question. Teachers at Austin, Lanier, and Reagan are definitely negative toward the quarter system.

Attitudes toward the quarter system also depend heavily on the curriculum area. The table below gives an overview by curriculum area.

AREA	ATTITUDE
Art Driver's Education Physical Education Language Arts Special Education	POSITIVE
Social Studies Foreign Language Industrial Arts	SPLIT
Science Math Health Homemaking Business Music	NEGATIVE

What appears to underlie this table is that the more skill-oriented areas, which require longer continuous blocks of instruction than 12 weeks, give more negative ratings.

For College Bound Students

The table below shows responses of teachers (both 1975-76 and 1976-77), counselors, and non-teaching personnel to the question, "Is the quarter system better preparing COLLEGE BOUND students than the semester system?"

RESPONSES	PERCENTAGE RESPONDING			
	1975-76	1976-77		
	TEACHERS (N=83)	TEACHERS (N=666)	COUNSELORS (N=43)	NON-TEACHING (N=103)
Preparing students better	29%	17%	26%	6%
Preparing students less well	20%	28%	21%	22%
Preparing students about the same	29%	29%	30%	42%
Undecided	22%	26%	23%	30%

Teachers definitely were more negative this year. Counselors are about evenly split, and non-teaching personnel tend to believe that the semester system prepared college bound students better.

For Non-College Bound Students

The table below shows the responses of teachers (both 1975-76 and 1976-77), counselors, and non-teaching personnel to the question, "Is the quarter system better preparing NON-COLLEGE BOUND students than the semester system?"

RESPONSES	PERCENTAGE RESPONDING			
	1975-76	1976-77		
	TEACHERS (N=83)	TEACHERS (N=663)	COUNSELORS (N=43)	NON-TEACHING (N=102)
Preparing students better	43%	19%	23%	15%
Preparing students less well	14%	22%	21%	35%
Preparing students about the same	22%	34%	37%	24%
Undecided	20%	24%	19%	26%

Teachers became more negative this year. Counselors are evenly split, and non-teaching personnel believe, more than 2:1 that the semester system prepared non-college bound students better than the quarter system does.

Misc. 3. Do high school principals and secondary instructional coordinators believe the benefits of the quarter system could be retained (and the problems avoided) by operating the revised curriculum under the semester system?

ANSWER: Secondary instructional coordinators are sold on the benefits of the quarter system; high school principals are not. As many as six of our principals might support a return to the semester system if it were a legal option.

SUPPORTIVE DATA:

This very difficult judgment was demanded of all high school principals and secondary instructional coordinators in our interviews with them in February and March, 1977. The results were:

RESPONSE	PRINCIPAL RESPONSES	COORDINATOR RESPONSES
Yes	4	2
Perhaps	2	0
No	3	13
No Response	0	4

Misc. 4. Do the courses offered in the high schools form a comprehensive and organized curriculum making it possible for the well advised student to gain necessary competence?

ANSWER: Yes, according to AISD high school teachers.

SUPPORTIVE DATA:

An average of 738 teachers responded to questions on the Teacher Questionnaire which referred to the curriculum. The percentage of agreement varied only from 75% to 88%. Thus teachers tend to describe the high school courses offered as forming a "comprehensive and organized curriculum which makes it possible for the well-advised students to gain necessary competencies." They also described their own courses as building "in an orderly way toward student competence" and their course outlines as forming "useful bases" for "valid courses" and suggesting "a wide variety of materials to supplement the texts." They also indicated that "when a teacher gives a grade (A, B, C) it means a certain proportion of material has been mastered by the student."

Teacher Responses by Curriculum Areas

These are districtwide data, and while teachers in all schools are in general agreement, there are substantial differences on some of the questions among teachers in different curriculum areas. These are reported in our Final Technical Report, Appendix J. The two tables below are examples of the diversity among teachers in different curriculum areas on two of the questions.

COURSE OFFERINGS ARE PROPERLY SEQUENCED	
CURRICULUM AREA	% AGREEMENT
Art	100
Driver Education	99
Business Education	95
Industrial Arts	93
Music	93
Mathematics	91
Foreign Language	90
Health	90
Special Education	89
Physical Education	88
Science	80
Language Arts	71
Social Studies	69
Homemaking	66

QUARTER COURSE OUTLINES ARE NOT FRAGMENTS	
CURRICULUM AREA	% AGREEMENT
Art	100
Physical Education	96
Driver Education	94
Health	90
Business Education	86
Homemaking	82
Industrial Arts	77
Special Education	76
Language Arts	72
Science	69
Mathematics	69
Foreign Language	67
Social Studies	62
Music	54

Despite differences on these questions, from 82% to 100% of the teachers by curriculum area agreed with the statement that courses offered form a "comprehensive and organized curriculum."

Misc. 5. Did the districtwide mean American College Testing Program (ACT) scores increase in 1975-76 from previous years?

ANSWER: No. The districtwide mean composite ACT score declined from 18.1 in 1974-75 to 17.8 in 1975-76, while the mean for a national 10% sample decreased from 18.6 to 18.3.

SUPPORTIVE DATA:

Since 1971-72 the percentage of AISD seniors taking the ACT has decreased from about 38% to about 24%. The 1975-76 national comparison sample, 10% of all students taking the ACT nationally, and our 1975-76 AISD sample (N=768) are comparable in percentage of male students. The AISD sample had a somewhat higher percentage of minority students (primarily more Mexican-American students) and showed about $2000 higher student-reported parental income than the national sample. A somewhat higher percentage of AISD students reported that they planned on a bachelors degree, and a somewhat lower percentage planned two-year programs or were undecided.

The students taking the ACT are a self-selected sample. This means AISD ACT-takers may differ on other relevant characteristics from the national sample of ACT-takers or from samples of AISD ACT-takers in previous years. Still, the samples appear comparable.

The Test

There are four ACT subtests: English Usage, Mathematics Usage, Natural Science Reading, and Social Studies Reading. The tests are designed to predict college success.

Results

Figure IV-36 shows that the national composite scale score has dropped from 19.9 in 1969-70 to 18.3 in 1975.76. The AISD composite scale score was 19.0 in 1969-70 and 17.8 in 1975-76. This is a change of -.26 scale score points per year for the national sample, and a similar -.20 per year change for the AISD sample. The disturbing and unexplained fluctuation in AISD scores (i.e. 1971-72 and 1972-73, Figure IV-36) make them difficult to interpret. About the only possible conclusion is that AISD composite scores are about .05 standard deviation below the national composite scores, and declining—but no faster than the national decline.

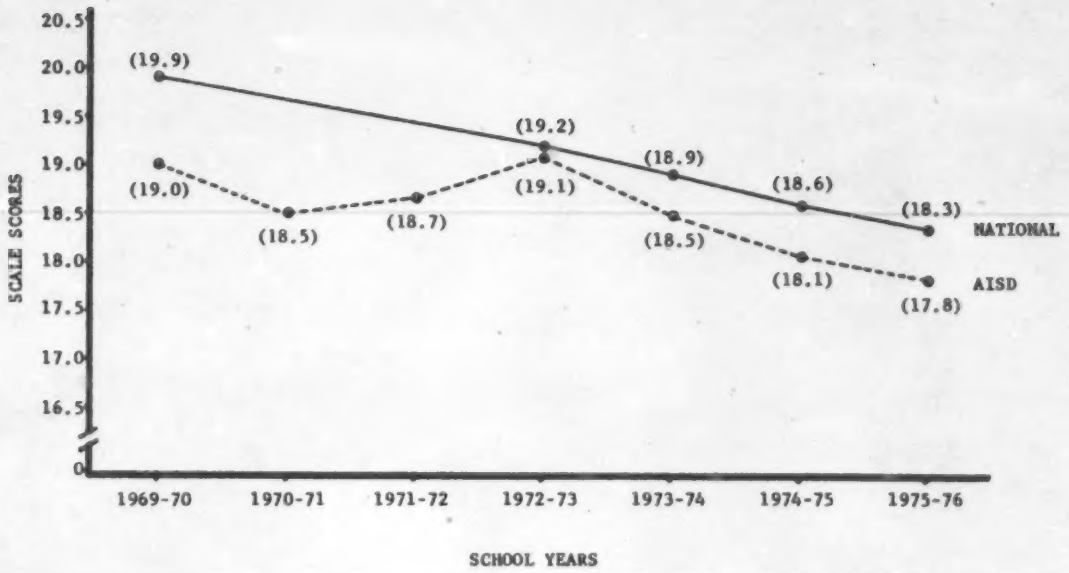


Figure IV-36: ACT COMPOSITE SCORES OVER A SEVEN YEAR PERIOD. AISD mean scale scores compared to mean scale scores for a nationwide 10% random sample from 1969-70 through 1975-76. Nationwide sample scores are not available for 1970-71 or 1971-72. Data acquired from ACT.

Misc. 3. Do AISD high schools have certain minimum conditions (student safety, student attitudes, and school atmosphere) present which are conducive to student learning?

ANSWER: Yes, in the judgment of the school staffs.

SUPPORTIVE DATA:

Teachers, counselors, and non-teaching high school personnel were asked three questions about conditions in their high schools which affect student learning. In general, from 60% to 85% of these personnel responded positively to the questions.

Students' Physical Safety

Two-thirds of the teachers and non-teaching personnel and three-fourths of the counselors believe that students feel "reasonably or very safe" in the schools. No group believes students are very worried about safety. Few group members (about 10-15%) even feel students have some concern.

Student Attitudes Toward Learning

About sixty percent of the teachers and non-teaching personnel and about three-fourths of the counselors think that students are "fairly willing and somewhat interested" or "eager and cooperative" in their attitudes toward learning. No group perceives students as "unwilling and openly hostile." Few group members (about 10-15%) even feel students are "somewhat negative."

Conditions Conducive to Learning

Seventy-five percent of the teachers and 85% of the counselors and non-teaching personnel feel that conditions in their high schools are conducive to student learning "most of the time" or "almost always." No group believes conditions are "almost never" conducive to learning and few group members (about 10-15%) would even feel conditions are poor half the time.

Misc. 7. Do AISD high school personnel experience satisfaction with their roles?

ANSWER: Yes; teachers, counselors, and the non-teaching staff all report high satisfaction with their roles.

SUPPORTIVE DATA:

Our office asked all teachers, counselors, and non-teaching personnel (assistant principals, deans, librarians, registrars, secretaries, clerks, and aides) "How much satisfaction do you feel with your role in an AISD high school?" Ninety to ninety-five percent of all personnel responded that they felt moderate or great satisfaction. Teachers reported less satisfaction that the counselors and non-teaching staff. Figure IV-37 presents the data on this question.

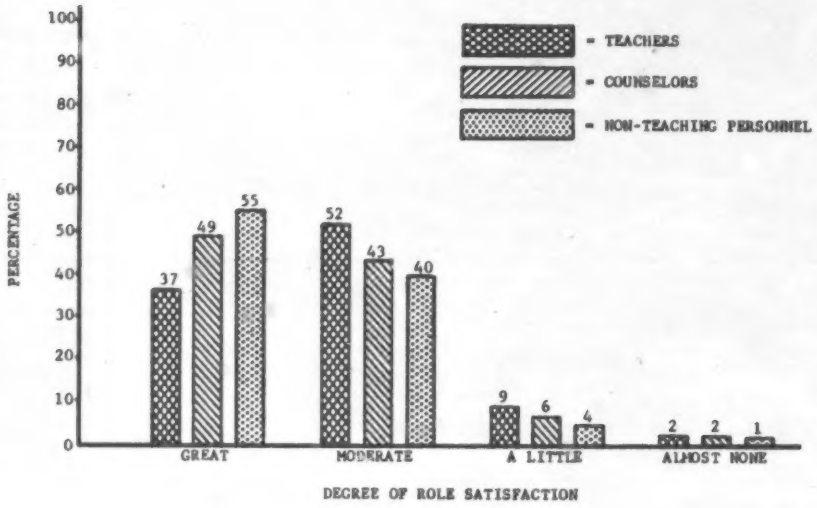


Figure IV-37: PERCENTAGE OF EACH PERSONNEL GROUP GIVING EACH RESPONSE ON ROLE SATISFACTION.

Misc. 8. Who should have the primary responsibility for advising students about which courses to take?

ANSWER: Subject area teachers should have the primary responsibility for advising students. Counselors also should have nearly as strong a role.

SUPPORTIVE DATA:

This year we asked students, teachers, counselors, and non-teaching high school personnel who should have the primary responsibility for advising students about which courses to take. Figure IV-38 presents the results.

The non-teaching personnel are divided into professional (assistant principals, deans, and librarians) and non-professional (registrars, secretaries, clerks, and aides), because the two sub-groups responded quite differently to this question.

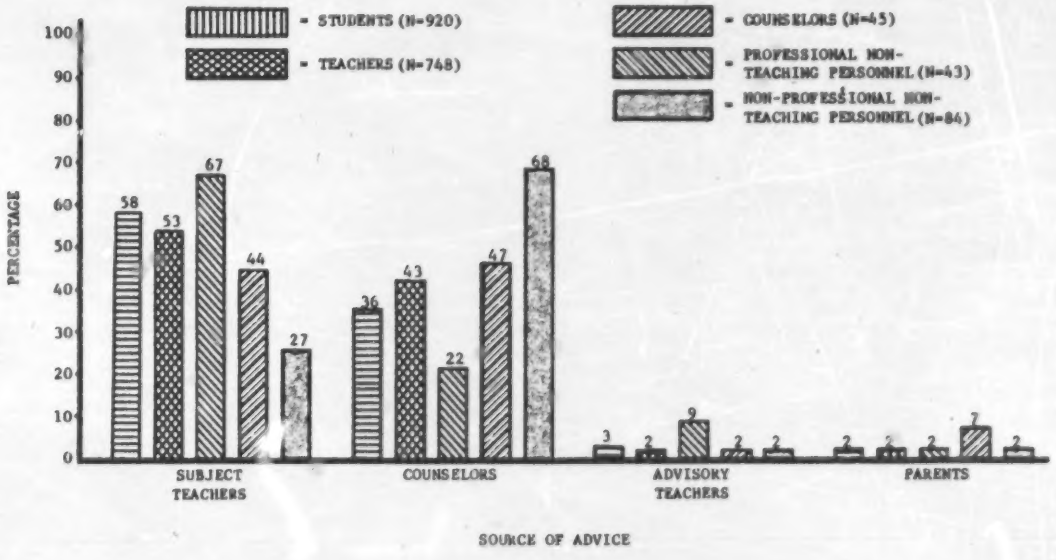


Figure IV-38: WHO SHOULD ADVISE? Percentage of students, teachers, counselors, and non-teaching personnel choosing each source of advice to the question, "Who should have the primary responsibility for advising?".

Subject area teachers are most frequently cited by students, teachers, and counselors as the group who should advise students on which courses to take. The professional non-teaching personnel split their nominations between subject area teachers and counselors.

The non-professional non-teaching personnel nominate counselors. Few members of any group would delegate major responsibility to advisory teachers or parents.

When delegating responsibility for the primary role in advising, those most knowledgeable and involved, the students, give the responsibility to subject area teachers 1.5:1. Counselors give the responsibility to subject area teachers 3:1. Teachers themselves would share the responsibility more evenly with counselors.

Misc. 9. How do high school students feel about school?

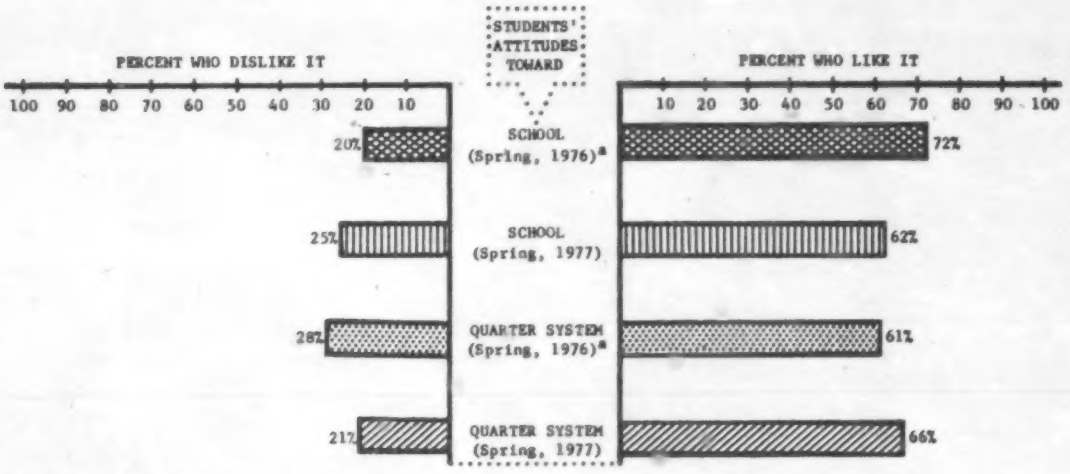
ANSWER: Students report liking both school and the quarter system.

SUPPORTIVE DATA:

This year 957 tenth, eleventh, and twelfth grade students responded to two items of the Student Questionnaire about their attitudes toward the quarter system and high school in general.

About three times as many students like the quarter system as dislike it. These students also report liking school this year; 62% liking it, versus 25% disliking it. Their attitude toward the quarter system specifically is somewhat better than their attitude toward school in general.

This year student attitudes toward the quarter system and school remained very similar to last year. Figure IV-39 shows that attitudes became a little more positive toward the quarter system, and a little more negative toward school. However, differences in sampling (i.e. last year's data included 9th graders) could account for these small changes.



[a]Includes 9th graders; 9th graders not included in the 1977 data.

Figure IV-39: STUDENT ATTITUDES TOWARD SCHOOL AND THE QUARTER SYSTEM FOR THE SCHOOL YEARS 1975-76 AND 1976-77.

Misc. 10. What do AISD graduates do after they graduate from high school?

ANSWER: Fifty percent of AISD's graduates attend four-year colleges. Another sixteen percent attend two year colleges or business/technical schools. About 25% get jobs; 7% join the military, are looking for work or become homemakers. About half the graduates who continue their schooling also work, and another quarter want to work. Three-fourths of the working students are working in areas not related to their high school training, and half the working non-students are working in areas not related to high school training.

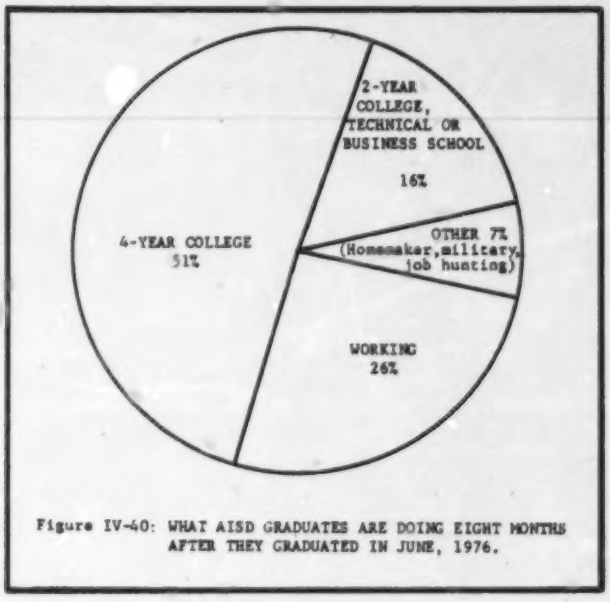


Figure IV-40: WHAT AISD GRADUATES ARE DOING EIGHT MONTHS AFTER THEY GRADUATED IN JUNE, 1976.

SUPPORTIVE DATA:

Counselor Reports

When we collected data for a survey of credits earned by a random sample of 171 seniors, we asked the senior counselor at each school to report the post-graduation plans of the sampled seniors. These reports are tabled below along with the student reports.

Student Reports

We asked ninth-graders on the Student Advising Checklist, tenth through twelfth-graders on the Student Questionnaire, and ninth through twelfth-graders on the SSHA what they plan to do after they graduate from high school. The results are presented in the following table.

REPORTED BY	POST-GRADUATION PLANS		
	FOUR-YEAR COLLEGE	TWO-YEAR COLLEGE, BUSINESS/TECHNICAL SCHOOL	JOB, MILITARY, DON'T KNOW
9th Graders (N=753) (Student Advising Checklist)	46%	7%	48%
9th-12th Graders (N=1320) (SSHA)	48%	15%	34%
10th-12th Graders (N=935) (Student Questionnaire)	53%	14%	33%
12th Graders (N=162) (Counselors' Reports)	54%	16%	30%

This indicates that about fifty percent of AISD graduates will attend four-year colleges; about 15% will attend two-year colleges or business, technical, or trade schools; and about 30% will get jobs, join the military, or do not yet know what they will do.

Former Student Reports

Our former students' reports of what they actually are doing substantiate the plans reported by students still in high school. 51% of AISD 1975-76 graduates are now attending a four-year college, 16% are attending a two-year or community college, business or technical school, and 26% are working and not attending school. 7% are in the military, homemakers, or looking for work.

School-goers. Of 197 former students who responded to the questionnaire, 68% (N=133) are attending some type of school.

TYPE OF SCHOOL	PERCENTAGE (N=133)
Four-year college or university	76%
Technical or trade school	3%
Private business school	2%
Community/Jr. College-may transfer to 4-yr. college	13%
Community/Jr. College; 2 yr. associate degree	4%
Community/Jr. College; certificate program	1%
Other	2%

These students are taking an average of 4.8 courses during the second semester. Almost half of them are also working; they work an average of between 20 and 30 hours per week. About another fourth are looking for work. Of the students who are in school and working, over three-fourths are working in fields not related to their high school training. Almost half of the working students who reported job categories are working as salespersons, with another 22% doing office work.

Workers. Of the former students who responded to the questionnaire, 26% are working and NOT attending school. They are working an average of about 40 hours per week, and over half are working in areas not related to their high school training. Office work, sales, and skilled labor each accounts for almost a quarter of the reported job categories for these former students.

Other. Four percent of the former students who responded to the questionnaire report they are in the military, 6% that they are married, and 2% that they are parents. However, the actual numbers involved for these groups are so small that the percentages may not be accurate or consistent from year to year.

Misc. 11. Are texts and supplementary materials available?

ANSWER: No, not as widely available as desirable. Substantial percentages of students (41%) and teachers (33% across all curriculum areas, but 45% in the required academic areas) indicate problems with availability.

SUPPORTIVE DATA:

When presented with the statement, "There are enough texts and other materials in the courses I'm taking," 16% of the 939 tenth through twelfth graders responding strongly disagreed; another 25% disagreed.

Teacher Judgments

When presented with the statement, "I have access to supplementary materials suggested by the course outlines," 7% of the 724 high school teachers responding strongly disagreed and 26% disagreed. The range of percentage of the agreement among different curriculum areas, was quite large.

Business, Driver Education, Health, Homemaking, and Special Education had little evidence of problems with access to texts and supplementary materials. The data for the remaining areas is presented in Figure IV-41. Language Arts, Science, Music, and Social Studies teachers evidence the greatest problem.

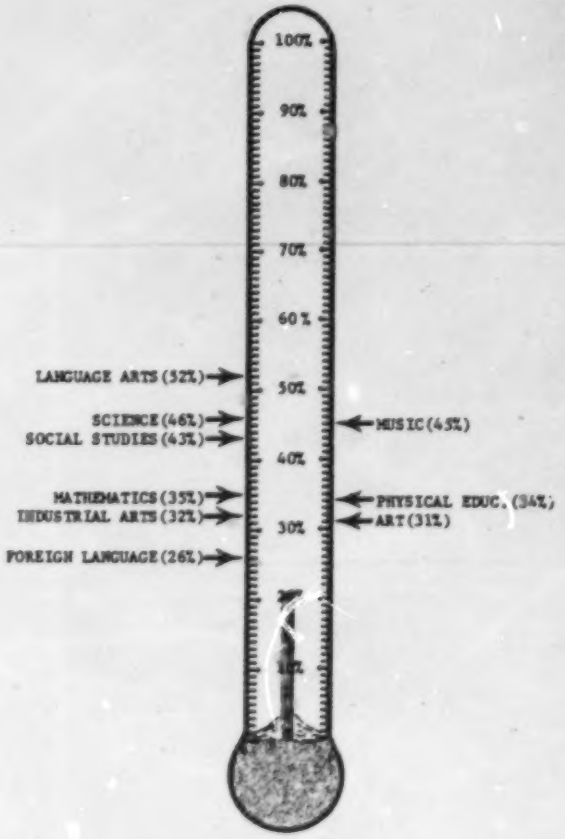


Figure IV-41: PERCENTAGE OF TEACHERS IN EACH OF NINE CURRICULUM AREAS RESPONDING THAT THEY DID NOT HAVE ACCESS TO SUPPLEMENTARY MATERIALS.

Principal Judgments

Principals ranked "a shortage of texts and supplementary materials" third most serious when they were given a list of possible problems associated with the quarter system and expanded curriculum.

Misc. 12. How many class periods per quarter course do teachers estimate are spent on non-instructional activities?

ANSWER: Teachers estimate about twelve of the 60 class periods are lost to instruction. When we add student absences (6 periods per quarter), and call even half of the test and examination time "lost" (2 periods), without even considering teacher absences, the 60-day quarter turns out for the average student to be about forty 55-minute periods—only 36 hours of instruction.

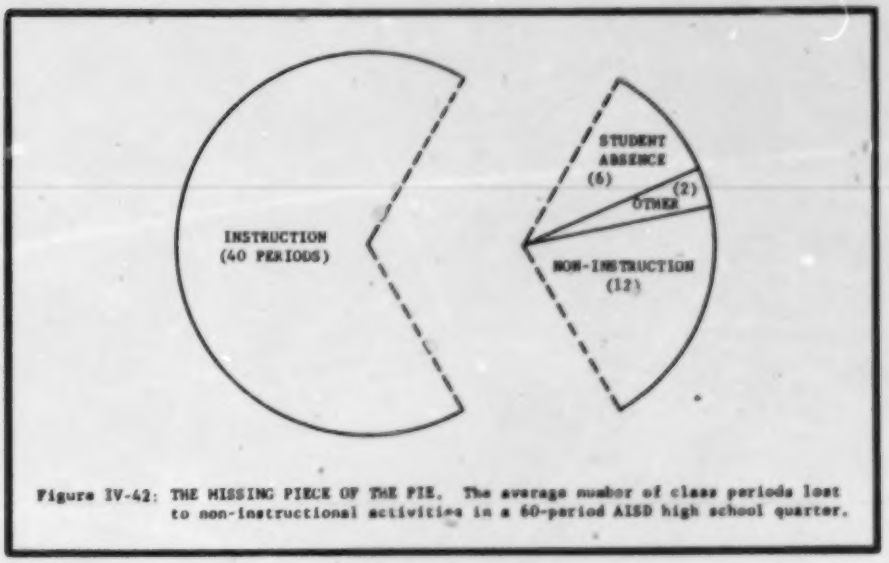


Figure IV-42: THE MISSING PIECE OF THE PIE. The average number of class periods lost to non-instructional activities in a 60-period AISD high school quarter.

SUPPORTIVE DATA:

Our office questioned all high school teachers on the number of periods lost to non-instructional activities. Our return rate was 83% and the data below represents over 700 teachers.

REASON FOR LOSS	PERIODS LOST[a]
Periods when all students attend assemblies	2.6
Periods when...one-third or more...miss class	2.2
Course advising	2.1
Course selection	1.9
Interruptions (announcements, visitors)	1.7
Teacher release time	1.1
Emergency situations	0.7
TOTAL	12.3

[a]Number of class periods "lost" from an average quarter course: Teachers responding "5 or more" were counted as 5.0.

On the same instruments, teachers (on the average) attribute 4.2 days to tests and final exams. At 90% attendance, the average student looses six additional days per quarter to absences.

Explosion of a Myth: Quantity of Schooling and Exposure to Instruction, Major Educational Vehicles[1]

DAVID E. WILEY
University of Chicago
and
ANNEGRET HARNISCHFEGER
CEMREL, Inc.

Schooling does have effects and rather than asking if there are any effects of schooling, we should be asking how much of an effect. We concluded that in schools where students receive 24 percent more schooling, they will increase their average gain in reading comprehension by two-thirds and their gains in mathematics and verbal skills by more than one third. These tremendous effects indicate that the amount of schooling a child receives is a highly relevant factor for his achievement.

Our results do not necessarily lead to a proposal for an equal amount of schooling for every pupil. Instead, our findings of important consequences of the quantity of schooling lead us to advocate more time for those who need it, so that more equal individual benefits of schooling will be obtained.